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THE AUTOMOBILE MAGAZINE

EDITED BY
ANGUS SINCLAIR

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Volume IV Number

Smith & Mabley

Seventh Avenue and 38th Street
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The Panhard

The Renault

15 H.P. Charron, Girardot & Voigt Car, Made in America

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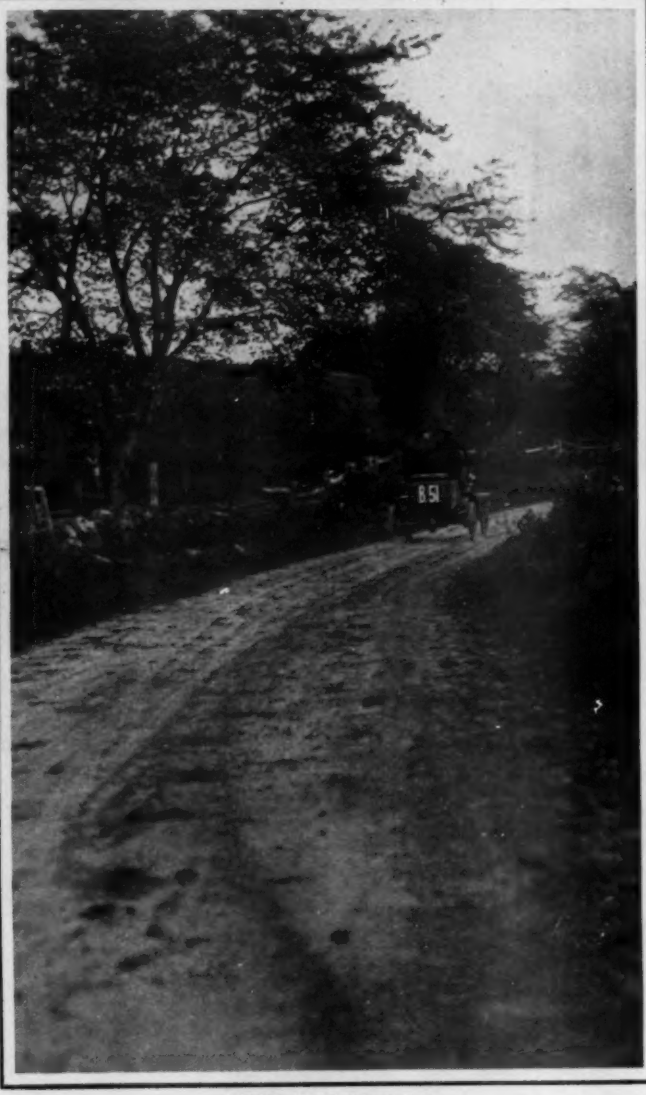


WHEN ALL GOES WELL

THE AUTOMOBILE MAGAZINE

VOL. IV NOVEMBER, 1902 No. 11

Reliability Contest ✣ ✣ New York to Boston and Return

IT was a notable and altogether the most instructive automobile road-week up to this time in the United States. The reasonable expectations of all concerned were for nothing less. Coming near to the end of a year, marked by large effort and substantial all-around progress—an event scarcely possible to be duplicated for a six-month at least—any failure would have been unduly multiplied to the disadvantage of the sport and industry.

Conversely, the opportunity to show a new and higher average of road performance would mean an impulse to the whole movement on lines broad and deep, accompanied by increased activities on the

part of designers and builders, as well as by large accessions to the rank and file of owners and users.

The real test of the motor vehicle to-day is in its ability to carry operators and passengers with comfort and certainty over the streets and highways as they are, not as the future will give them to us. All other requirements, not excepting even speed, are less essential, though all of them are important in the improvement and final high efficiency of the self-propelling machine. Toward this useful end the special efforts of the year have been directed; and it was inevitable as well as fitting that the different lines of their progress should somewhere meet. The only proper place was on the road, the best scheme a "Reliability Run," with the element of competition present, but held in half-check. It was an opportunity for each man to back up his faith with the product of his thought and work.

Participants incurred no little expense (entrance fee alone $50 each vehicle) for the privilege of going in company with their associates or their rivals over a series of six separate and stated days' journeys, but with an uninterrupted responsibility from beginning to end. In the test, publicity and record were to be given, not to appearances and single notable performances, but to mishaps, irregularities and the like. The semi-oblivion of the "Not reported further" contingent was ever ready to settle down upon the unfortunate as well as the laggard. It was a case of summoning all the foes of automobilism to meet its picked champions in road combat, and on terms of their own choosing. Triumph over such conditions is evidence of a thing grown strong.

Of the large number of vehicles which assembled in the vicinity of Fifth Avenue and Fifty-eighth street, New York, on Thursday morning, October 9, seventy-five had been entered, weighed, numbered and made ready for the round trip to Boston. They were lined up in two close columns on West Fifty-eighth street until the hands of the Plaza Bank clock pointed to 9 o'clock, when Starter Thayer gave the word which transformed the waiting vehicles into one long moving line. With the cars carrying the officials, and the

independent followers of the run, the procession stretched the whole length of Central Park East, about two and a half miles, with only a streak of daylight between some of them. Five of the original eighty entries had withdrawn, but their absence was unnoticed except by close count or reference to the printed list as furnished by the club.

Whatever advantage accrued to the first vehicle to get under way came to CI, the large Packard operated by Harlan W. Whipple, and accompanied by a mechanic and two passengers. It started on the instant, making a broad turn into Fifth avenue amid the cheers of the crowd, some of whom had come in automobiles and fashionable carriages to witness the beginning of the run. The other seventy-four were sent off at intervals of fifteen seconds, without a hitch or delay of any sort, enabling Secretary Butler and his staff to take the 10:02 A. M. train from Grand Central Station for Norwalk, the first noon control.

Photo. N. Y. Daily News

W. K. VANDERBILT, JR., LOOKING THEM OVER

The route—laid out alongside instead of through Central Park—was up Fifth Avenue to One Hundred and Twelfth street, to Seventh avenue, to One Hundred and Fifty-third street, to Central Bridge, over into Jerome avenue, to One Hundred and Eighty-ninth street, to Webster avenue and Fordham road. Thence it was over the identical through line shown in the tour in the June number of THE AUTOMOBILE MAGAZINE, over Pelham Parkway and its northward connection to New Rochelle, Mamaroneck, Portchester, Rye, Greenwich, Mianus, Stamford and Noroton to Norwalk.

This is one of the finest forty-five miles imaginable, either for a pleasure trip or a club run, almost all the way being over parkway

and sound shore roads, hilly at times, but in good condition all the way. Consequently there was no serious trouble anywhere on the line, every starter but one making Norwalk before the time to begin again came around. B39, a De Dion, operated by Kenneth A. Skinner, appeared first at the noon control, but ahead of schedule, so he turned back to kill time, so Whipple's Packard was first at noon control. The latter had damaged a tire, but did not stop for it, coming in on the rim and making a change during the luncheon hour.

VIEWED FROM THE REAR

SUPPLY SHIP OF THE WHITE SQUADRON

MUSCLE MAKING TIRE EXPANSION

More dust was raised on this part of the run than any other, and contestants, observers and passengers who were in the midst or in the rear of the column suffered some inconvenience. Coming down the hill over fine pavements to the Norwalk House in a bunch—all of them dust-covered, but strong and undismayed—was perhaps the most picturesque, and certainly the largest, entry anywhere made. The swift descent from outside transformed this pleasant little New England village for the hour into a country fair, with the automobile element predominating. A single policeman paced up and down through the crowd, which had evidently gathered from far and near.

The single disappointment here was due to the inability of the one hotel to accommodate the automobile contingent. Its

supply of tickets was inexhaustible, but realizing upon them was another matter; and in the final extremity restaurants, lunch wagons and even free lunch counters were raided, the meal tickets being given away or kept as souvenirs of the first noon stop.

Start was made from Norwalk at 1.40 P. M., the trolley cars and white arrows showing the way to and through Bridgeport and into New Haven, the first over-night control, seventy-nine miles from New York. Although American-built machines were predominant in the rank and file of the contestants, it happened that two foreign cars, Kenneth A. Skinner's De Dion and Leonard D. Fisk's Panhard, led the way into New Haven, arriving at 4:4:30 and 4:4:45 P. M. respectively. This day's run was fatal to two entries, the Neftel gasolene-electric, operated by Knight Neftel, and the Buffalo, Sr., entered by Mechaley Brothers; the former simply dropping out of sight, and the latter disabled by some careless repair work at New York, unnoticed until the trip had begun. A large crowd watched the entry into New Haven, which was made up to the center of the city, alongside the Yale University campus and on York street to a building formerly occupied as a bicycle factory. It was an ideal garage, but the supply of gasolene ordered in advance proved inadequate to the requirements of the

IN THE STABLE OF ITS RIVAL

MR. HAYNES AND C. 10

NORWALK THE NO DINNER CONTROL

WHERE BOSTON HOUSED THEM

vehicles, and there was some delay in getting more.

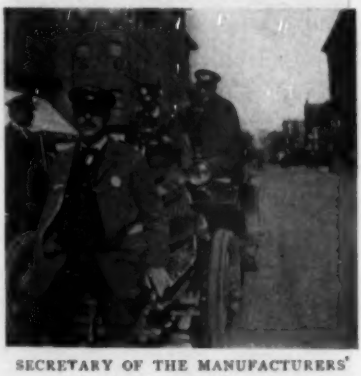
If there was any doubt that the automobilists were looked upon as a good thing by the "genial bonifaces" along the line, it was dispelled when the bills at the New Haven House and other hostelries began to come in. Men in the run who were accustomed to Waldorf-Astoria rates saw that a still higher level of values (?) had been found, and reached for that side of their pocketbooks which was supposed to be kept intact until the return end of the journey. But—for the once—there was no escape, though the memories of four and five dollars apiece for three or more persons in a single room will do for a long time.

Friday morning York street in the vicinity of the garage looked like a combination between an automobile meet and a military camp. It was cool and damp, but with a suggestion of coming warmth in the air, which encouraged the hope of a fine day. Again the entire party was sent away exactly on time, retracing the route of the night before to Chapel street, thence by Orange and Lawrence streets to Main street and the open country. All the way to North Haven and much of the way to Hartford the road is in sight from the railway, and passengers on the 10:10 train out of New Haven caught many glimpses of the procession at various points along the line.

LUBRICATING

The sand stretch on the way to Meriden was successfully negotiated by all, but there was a narrow escape from a serious accident at Yalesville, just above Wallingford. The Haynes-Apperson runabout, driven by Heber Michener, was forced into a ditch by a Panhard, the road ahead being blocked, resulting in a broken spring

hanger. A new one was made after two hours' work at a country blacksmith shop, and, though the Hartford control was thereby lost, start was made with the rest at Springfield the next morning. Other mishaps were of a minor character, principally tire troubles, and the schedule time of a trifle over three hours was kept to a minute by the leaders.



SECRETARY OF THE MANUFACTURERS' ASSOCIATION

At Hartford a pleasant surprise awaited the men of the trade and press, together with others identified with the run, in the shape of a complimentary dinner at the Allyn House. It was the forethought of the Hartford Rubber Works, evidenced in the person of President Louis D. Parker. The leisurely aspect of the dining-room was interfered with, however, by the announcement that the start would be made a half hour earlier than the printed schedule, which caused some hurry to get the vehicles in line. This was due to the fact that the Springfield garage, though well adapted in other ways, was unlighted, and it would be necessary to get in before dark.

THE BELLES OF THE RUN

The run of twenty-six miles to Springfield—not only the shortest distance between controls, but with the New Haven-Hartford portion making also the shortest way's run of the three—was on Trumbull street to Main to Windsor avenue to Windsor Locks and up the west side of the Connecticut River to the bridge just south of Springfield. It was fair-to-good going all the way, with pleasant river views on the right and fine farms on the left. Roads being as a rule level and nearly all the time straightaway, the maximum of fourteen miles per hour was difficult to observe, especially since the second over-night control was a half mile out of the city on the

MESSRS. KIRKPATRICK, SCARRITT AND HILL

WORCESTER, MASS., CONTROL

WINDSOR T. WHITE, WITH ONE OF HIS WINNERS

direct way from Hartford. This fact, considered in conjunction with some eleventh-hour shortening of the route near Windsor Locks, very likely saved the first arrivals at Springfield from a penalty for coming in before the expiration of the minimum time. As a matter of fact, they commenced to arrive before all of the officials had come in by train.

After the machines had been placed in the garage, a vacant riding academy on Marble street, just off of Main, the crowd took the street cars to the downtown hotels and prepared to enjoy the longer than usual respite which the quick trip from Hartford had made possible. There was a lot of shop talk and some reminiscences of old Springfield bicycle days, many of the participants in which were represented either in the automobile ranks or by residents who came around to meet them. In the evening a banquet at the Cooley House, tendered by the Knoxmobile Company, had as speakers Mayor Ellis, of Springfield; President Shattuck, of the A. C. A.; Chairman Scarritt, of the Contest Committee, and others.

For the third and last day's run of the outward trip, unusually full and complete preparations were made, due in part to the continued cool weather. The distance was fully 100 miles

(though officially called a trifle less), known in advance as rough and hilly in spots, and strange going to the majority. Everything that had been provided in the way of extra equipment for men and machines was called out, and as the column was made ready for its move on Palmer and Worcester, topcoats were in order, while dress-suit cases and other paraphernalia seemed to have multiplied since the evening before. The voyagers started in close file down Main street to State, thence out over THE AUTOMOBILE MAGAZINE route to Palmer, the Warrens, Brookfields, Spencer and Leicester, only to be separated from one another in negotiating the hills and rough places that alternated with the fine, new State road from end to end of this portion.

One hill just out of West Brookfield caused some stops, the passengers getting out and helping push the vehicles up. It may be said, however (though the fact seems nowhere to have been stated), that this hill is not ordinarily a part of the Boston-Springfield or Springfield-Worcester run. A shorter and much better road passes somewhat to the south, but it is now in process of repair, and therefore unridable. Whether or not stops made at this point should be charged, in consideration of

WHERE ALL WAS LOVELY

W. J. STEWART, HIS GUEST AND OWEN'S CAP

THE GROUT THAT WON

the special circumstances noted, is a reasonable doubt. The Spencer and Leicester hills, though equally long and steep, were so smooth and hard that they caused little or no trouble, and the control was again reached on time, two Oldsmobiles, operated respectively by Messrs. Owen and Page, leading. Of the half dozen stops outside of those on the bad hills, all were from the breaking of small parts or tire failures. Notwithstanding these mishaps, the entry into Worcester was mainly in a bunch again, the cars behaving well and lining up on both sides of the street for the noon control in a way not to interfere with the passing of the trolley cars.

Luncheon was taken at the State Mutual restaurant, there being no hotel in that part of the city, but a good automobile supply station; and as the sky was overcast and the air damp, rain was prophe-

A SEARCHMONT QUARTETTE

THROWING DUST ON THE TROLLEYS

sied before reaching Boston. Starting time came none too soon, and over the good roads for the last 45 miles the low-speed average came in for a great many good-natured but left-handed compliments. Through Shrewsbury, Northboro, Southboro, Framingham, Natick and Wellesley to Newton Lower Falls and Newton Center, to Chestnut Hill Reservoir and Boston was a perfect ride—until the very last—when the rain did come and gave the tourists their only disagreeable day's finish on the run.

Three vehicles reached the Park Square garage so close together that only the official summaries will satisfy the minds of even the witnesses—B39, Kenneth A. Skinner's De Dion; B51, Stearns' steamer, and B16, Ward Leonard. The crowd, unable to believe it wasn't a race, adjudged it a tame finish, and melted away, while the advance guard of competitors—all indeed except officials and news-

paper men—went to the night control or to their hotels without waiting for the rear to come up. Counting those who went out from Boston to accompany the vanguard into town, with the officials and the "flying squadron" from Worcester and beyond, there must have been 200 cars over the last twenty-five miles into Boston.

OVER SUNDAY AT THE "HUB."

From Saturday night to Monday morning was allowed for rest, social amenities and such repairs as contestants desired to make, while the official observers looked on and wrote down. The social side was made the more interesting by the open house which the Boston Automobile Club kept at their fine new home on Boylston street, between Fairfield and Exeter. Each person identified with the run received an invitation to the reception held there from 8 P. M.

IN NORWALK TOWN

TAKING IT EASY

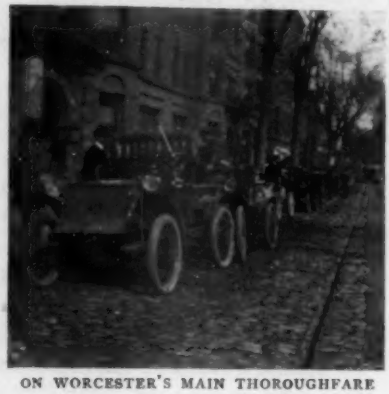
to midnight on Saturday, the same being also the equivalent of a "card" to the club for so long as the tourists should be in the city. Though the night was disagreeable, the reception was attended by a crowd which taxed the capacity of the establishment. There were no formalities of any kind, neither introductions, welcomes nor adieus, but it was as thoroughly enjoyed as such an event could be.

And it was not all talk, for men who have journeyed together for three days on the road, when they meet kindred spirits in cozy clubrooms, have a way of getting down to fundamentals which means something in the way of new plans and purposes for the good of the sport and trade. Among the visitors of the evening were a party of Boston physicians with the automobile fever on. They came in by invitation of Secretary Rust, of the club, and went upstairs to look over his big Mors, which had been carried up in the elevator made

LEAVING NEW YORK

to lift machines up and down. If you want to see how large an automobile can appear, look at it in an upstairs workshop.

All day Sunday the center of interest was the control, though the inner rooms, where the competing vehicles were stored, was guarded with such ridiculous circumspection that well-known members of the press had an officer assigned to watch them on any tour of inspection they wished to make. Perhaps someone had tried to injure one of the cars; if so, it is certain that the culprit was without any open connection with the run. But in and about the control station the utmost freedom prevailed, vehicles coming and going at will, many owners taking advantage of the bright afternoon to give their friends—and prospective purchasers—a ride. It was whispered that some good sales were arranged for in this way. The layover of two nights also allowed those meeting with accidents on the Springfield-Boston portion to make necessary repairs and get in line with the more fortunate for the return trip.



ON WORCESTER'S MAIN THOROUGHFARE

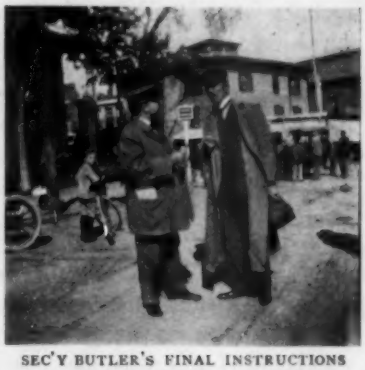
HOMEBOUND AND THE FINISH

The return journey was over exactly the same route and made, of course, by much the same crowd, though a few of the non-contestants returned by train, including President Albert R. Shattuck, of the A. C. A., who was kept from participating in the return trip by urgent business at New York. The detail of the second half is naturally much less interesting than the first half, and is covered in the summaries. We therefore trace the way back by items of special and personal observation, showing some of the outward features of the run.

There were a number of new observers on the way back, some of the original number having been obliged to leave, while others were apparently satisfied to let someone else go over the return portion. The latter class gave Secretary Butler considerable trouble, particularly at Boston, for it is no easy or pleasant matter to hunt up men at the eleventh hour to take the places of others supposed to be enlisted for the round trip. A clearer view of the responsibility of such an appointment would be a good thing.

From the vantage point of a stanch touring automobile, the trip across the State of Massachusetts in October is an experience long to be remembered. The trees are decked in their richest colors, the lakes and streams sparkle, and a quiet somberness rests on every landscape. A cordon of fine small towns and cities stretches from Boston to Worcester, with many pleasant views, but none excelling the descent—westbound—of Maple avenue from Shrewsbury to Lake Quinsigamond. The fine broad thoroughfare winds in and about the hills, turning this way and that until it drops you, as it were, into the lap of Worcester. It is a trip worth taking when one has more time than can be spared from a reliability run.

It was a fine row of auto-



SEC'Y BUTLER'S FINAL INSTRUCTIONS

TWO HARTFORD PRESIDENTS—MESSRS. PARKER AND DAY

THE LUNCH—HAYNES-APPERSON

mobiles which lined up at Worcester for Monday's noon control, furnishing several pictures to the newspaper men. Regular traffic—including a solid column of trolley cars—was not interfered with, suggesting the inquiry then and there whether or not as many horse-drawn carriages could have done as well with double the space. Probably not.

Another showing of the motor vehicle's adaptability happened in crossing the Connecticut River by bridge just below Springfield, where there is just about enough room for two vehicles to cross abreast. The whole line had been brought to a stop (unpenalized) by a freight train blocking the way. When it cleared the crossing there were perhaps seventy machines ready to take the bridge at once; and if this were not enough, one side of the structure was closed for repairs. It was the prettiest piece of jockeying seen by us on the trip, and so far as known no machine was stopped in the passage of the river at this point.

Of the many kinds of half-passable roads, that undergoing repairs is the most exasperating; and the worst stretch on this trip was between Windsor and Hartford. Operators looked ahead with fear and trembling, but struck boldly out to ride the edges and pulled through without stop or accident. To have broken down at this spot would have disgraced no vehicle.

At several points along the route, farmers and others held their horses out by the road in order to give them a continuous-performance view of the procession. It was not only a good scheme of itself, but it showed that the people in the country no longer look upon the automobile as a temporary nuisance, and are making an effort to get acquainted with it. When a fractious horse was met on the road, it was a ticklish problem, with a great deal of care necessary to avoid a stop—or worse. Aside from the desire to keep going, a pride in safe passage at such times was widely noticed among the operators, adding to the observant public's estimate of the automobile's adaptability, not only to the roads, but to the conditions of travel to-day.

Of the social functions on the return trip, by far the most enjoyable was the entertainment provided at Springfield by the J. Stevens Arms & Tool Co. It consisted of a theater party at the Nelson, followed by a smoker at the Worthy Hotel. Under the cover of hospitality there was not only good fun, but some sharp forecasting of new automobile developments, especially in the way of future long distance contests. During the stage performance

Percy Owen, operator of C52 Winton, leaped from his box and danced with the leading lady, greatly to the amusement of his fellow automobilists and the surprise of the rest of the audience. Later at the hotel, Chairman Scarritt, of the Contest Committee, spoke of the high average of road performance on this trip as compared with similar trials here and abroad; and then passed on to a discussion of an Endurance Run to St. Louis for 1904, with no elaborate route outlines, arrangements for "controls" or observers. He would take a map of the United States, point to the junction of the Mississippi and the Missouri and say, "There is St. Louis; get there in not less than ten days or more than fourteen days." Such a performance would be judged, of course, on its merits as a whole, and not by isolated details of it. A sentiment was abroad among the listeners that such a project, though it might be less popular than those already held, would contribute another and valuable chapter to automobile road experience. Dr. P. E. Doolittle, of Toronto, Ont.; E. E. Britton, of New York; W. J. Stuart and others followed in the impromptu programme.

The short run from Hartford to New Haven was again made by most of the vehicles under the minimum time, so the last three miles was a competition of loafing, with ingenuity overexercised to keep from a full stop at times. Here fun broke out on the road, with a number of incidents to relieve the slow approach of monotony. Percy Owen brought in a crate of plump Connecticut chickens, which he had bought at a record price from a farmer whose usually uneventful way to market had been made a trifle exciting by meeting the procession of automobiles. There was a spill of crates, followed by a "deal," with enough in it to send the farmer away rejoicing. At the garage the chickens were handed out to a party of Yale students; and it was said by those who lingered that the aroma of fried fowl was to be noticed about the dormitories as the evening progressed. It was a matter of comment how many college men came around to the New Haven control both morning and evening. Enough of them already own automobiles to make up a club; and more of them will when books are exchanged for the working tools of life.

There was general satisfaction when Wednesday morning brought fine weather and the promise of a satisfactory and punctual finish. Contestants and observers were early at the garage, and nothing in the way of final preparation seemed to be overlooked. Sixty-eight vehicles were in line, some of them destined to partake of humiliation on the final stage, although every one eventually fin-

ished. The talk of some fine jockeying for the honor of being first at the finish had its quietus in the issue and distribution of an "important notice," signed by the Contest Committee. It stated that the official cars, two in number, and displaying red flags with the letter "C" in the center, would run into the home control just under the minimum time for the competitors, and any vehicle passing these cars en route would be immediately disqualified. It was to the point and meant business, so the possibility of overreaching at the finish was swallowed up in the reliability feature, and the latter was carried consistently through to the end.

Just two minutes past four o'clock in the afternoon the first car could rightfully come home, and four were so close together that in the time-table of arrivals they are entered alike—"4:2 flat." These were: (1) B30, Stevens-Duryea 6 H. P. gasolene; (2) A63, 4 H. P. gasolene Oldsmobile; (3) A64, 4 H. P. Oldsmobile, and B47, 8 H. P. gasolene Knoxmobile. It is thought, however, that they will stand officially in the order given. Two more tied as to time only fifteen seconds later (4:2:15), B44, 16 H. P. Darracq, and B31, 6 H. P. Stevens-Duryea. The foregoing does not mean, however, that each has a perfect score throughout, but good final runs and (especially) fortunate finishes. The main body was at the back of this vanguard, a few unfortunate ones coming in after dark, among them C43, Packard, delayed by a broken axle bearing at Bridgeport; A36, Locomobile, troubled in getting water; B49, the Italian car, from overheated engine, and B38, Elmore, stopped by some reason within sight of the finish.

GENERAL SUMMARY OF RESULTS

Vehicles finishing with perfect scores and thereby tied for the President's cup, and which under subsequent arrangement were awarded gold medals:

Machine and Operator.	Motive Power.	H.P.	Wt., Lbs.
Packard, H. W. Whipple	G.	24	2,600
Packard, G. L. Weiss	G.	12	2,100
Prescott, H. M. Wells	S.	4½	1,350
Lane, J. Harrison	S.	9	1,900
Haynes-Apperson, F. Nutt	G.	9	1,900
White, P. H. Deming	S.	6	1,450
White, W. T. White	S.	6	1,450
White, G. S. Waite	S.	6	1,450
*White, A. J. Scaife	S.	6	1,600
Grout, C. B. Grout	S.	6½	1,300
Fournier-Searchmont, L. Sackett	G.	8	2,200

Knox, Harry Knox	G.	8	1,400
Oldsmobile, R. M. Owen	G.	4	800
Fournier-Searchmont, J. Bunting	G.	10	2,300
Fredonia, C. P. Gathier	G.	9	1,300
Foster, F. J. Holly	S.	4	1,300
Fournier-Searchmont, R. A. Green	G.	8	2,100

*Delivery wagon.

In the awarding of the cups for second, third and fourth best performances the committee, after considerable figuring, announced the following as being entitled to the honors:

Winthrop E. Scarritt Cup, for second best reliability score, won by J. W. Duryea's 6 H. P. 1,050-pound Stevens-Duryea. The twenty seconds lost by Mr. Duryea was through no fault of the machine, and so he was placed ahead of the other two. Mr. Duryea carelessly neglected to open the stop-cock between the gasolene tank and the carbureter.

George F. Chamberlain Cup, for third best reliability score, won by C. S. Mason's 8 H. P. 1,400-pound Knox. This machine lost twenty seconds through a stalled motor.

John A. Hill Cup, for fourth best reliability score, won by Harold H. Brown's 12 H. P. 1,690-pound Darracq. The operator, being unable, owing to the dust, to see the rain gullies ahead, put on his emergency brake to save breaking his springs.

The three "placed" cars scored 2,091 points each, or only one point less than the 2,092 maximum attained by the seventeen gold medal winners of first honors.

Of the remainder of the sixty-eight finishers the committee rendered the following decision:

Operator and Machine.	Av. Miles Per Hour.	Reliability Marks.
Henry B. Joy (Packard)	14.00	2,089
O. K. Raymond (Lane)	14.00	2,085
Elwood Haynes (Haynes-Apperson)	14.00	2,072
W. E. Evans (Autocar)	14.00	2,083
Percy P. Pierce (Pierce)	14.00	2,088
H. K. Browning (Apperson)	14.00	2,088
Arthur Gardiner (Rambler)	14.00	2,088
R. S. Davis (Locomobile)	14.00	2,091
H. L. Newman (Elmore)	14.00	2,087
K. A. Skinner (De Dion)	14.00	2,082
F. F. Cameron (Oldsmobile)	14.00	2,070
S. G. Averill (Franklin)	14.00	2,086
W. A. Sweet (Stearns)	14.00	2,027
Percy Owen (Winton)	14.00	2,090

E. A. Riotti (Long Distance)	14.00	2,090
Charles Steffey (Pierce)	14.00	2,085
C. E. Proctor (Winton)	14.00	2,074
W. J. Gould (Grout)	14.00	2,087
Charles A. Grout (Grout)	14.00	2,081
Carl Page (Oldsmobile)	14.00	2,088
L. D. Fiske (Panhard)	14.00	2,082
C. H. Wilson (Rambler)	14.00	2,084
J. F. Loughlin (Packard)	13.75	2,034
P. G. Fleming (Ward-Leonard)	13.50	1,974
Elmer Apperson (Apperson)	13.81	2,070
Edgar Apperson (Apperson)	13.63	2,021
P. Nestman (Stevens-Duryea)	13.90	2,073
S. T. Davis, Jr. (Locomobile)	13.68	2,022
J. F. Newcomer (Elmore)	13.65	2,031
Benjamin Smith (Packard)	13.11	1,813
E. H. Barker (Long Distance)	13.11	1,918
G. P. Plaintiff (Rambler)	13.74	2,022
M. H. Winters (Toledo gas)	13.92	2,079
A. Smith (Automotor)	13.84	2,044
C. L. Brown (Rambler)	13.82	2,070
W. A. Frederick (Oldsmobile)	13.89	2,049
Park Dinsmore (Foster)	13.83	2,070
H. Michener (Haynes-Apperson)	12.79	1,910
H. B. Brazier (Brazier)	12.72	1,893
A. L. Riker (Locomobile gas)	12.68	1,895
Murray Page (Locomobile)	12.25	1,848
R. D. Willard (Autocar)	12.65	1,867
F. H. Fowler (Knox)	12.03	1,798
Harry Gruitard (F. I. A. T.)	12.28	1,812
F. S. Croush (De Dion)	12.61	1,885
Dr. M. A. Carman (Foster)	10.81	1,547
F. A. La Roche (Darracq)	8.65	1,262

STARTERS VS. SURVIVORS AND VS. CLEAR SCORES

	Gasolene	Steam	Electric
Starters	55	19	1
Survivors	50	18	0
Perfect Scores	9	8	0

VARIATIONS IN THE LINE.

In Line at Start, New York	75
In Line at New Haven	73
In Line at Springfield	72
In Line at Boston	72
In Line at Springfield	70
In Line at New Haven	68
In Line at Finish, New York	68

SUMMARY OF DISTANCES

	Miles	
Distance officially covered	488.4	
Distance actually covered	500	or more
Distance covered first and sixth days, each	79	
Distance covered second and fifth days, each	68.6	
Distance covered third and fourth days, each	96.6	
Average distance per hour	14	
Average distance per day	83	
Approximate total of road miles covered	36,000	

* * *

To speak separately of individual performances would be to write a history of the trip from the viewpoint of each machine; the summaries will give the general concrete result, but the details of it will never be formally brought together. The lessons learned best of all are the deductions made by men who watched the behavior of a favorite—or rival—vehicle with some special object in view; and these points will be unfolded more in the progress of the industry than anywhere else. Among the machines to attract special attention were Harlan W. Whipple's big Packard, the highest-powered car on the run, 24 H. P., with four enormous hubs, reminding one of the scythes used as axle-extensions on Greek and Roman war chariots; and the Duryea three-wheeler, in which Mr. C. E. Duryea flitted about in spectacular fashion, always ready to argue, but apparently never ready to match his machine officially with those in the run. Then there was A19, the Torbensen Gear, a gasolene machine, which came to grief at Worcester through the bursting of a tire, and after-damage to the rim. This vehicle reached Boston some hours late and had more trouble on the final run, arriving at New York about 7 P. M.

B65, the gasolene Automotor, began the run under perhaps the most exceptional conditions of them all. Its mate originally entered was, at the last minute, found to be unavailable, and this one was taken out of private service in Hartford at an hour's notice. This was Wednesday afternoon, and as there was insufficient time to ship by freight or boat, it was run through in the night to New York, and started with the rest Thursday morning. It was driven by Arthur P. and Hinsdale Smith, and had an absolutely clear record to Springfield, and though with some minor mishaps later, it finished in good shape at New York. Elmer and Edgar Apperson had brought on two heavy gasolene touring cars, the first product of the Apperson Bros.' establishment. They were finished in royal purple, and

as a novel feature, had electric lights showing from colored globes at the rear.

The veteran inventor, Thomas B. Jeffery, watched the work of the Ramblers with a great deal of interest, and rode considerable of the distance in one of them. Most conspicuous as a group were the White steamers, entered and kept together as much as possible from start to finish, and especially in the reckoning at the finish. F. A. La Roche's 16 H. P. Darracq had all of its troubles—mainly due it is said to animus on the part of a discharged employee—on the outward run, and finished with the van. The Winton, in which J. Harry Fosdick toured in Europe six weeks this summer with H. D. Corey and party, was let out of the Custom House too late to start with the run, but it caught up at Springfield and was with the advance brigade to Boston. Of the Locomobile entries, C29, the new gasolene product, operated by A. L. Riker, and C34, the heavy steam vehicle of curious design, driven by S. T. Davis, Jr., received the most attention. President Shattuck, of the A. C. A., drove his Panhard to Boston, and Chairman Scarritt, of the Contest Committee, had his Autocar throughout the run.

It is always in order to speak of the bridges that carry us safely over—in other words of the vehicles from which we have seen and kept track of the run. Different members of THE AUTOMOBILE MAGAZINE staff rode from New York to Boston and most of the way back with Mr. Elwood Haynes, in C10, the Haynes-Apperson surrey, and enjoyed the journey itself scarcely more than the acquaintance made thus the more possible with the pioneer Western inventor and builder and his staff. C10 took the ups and downs of the road like a thing of life, and the small amount of vibration when at rest was impressed upon us. In addition to the surrey, the Haynes-Apperson Co. entered a phaeton, operated by Frank Nutt, which was one of the twenty to finish with perfect records; and a runabout, handled by Heber Michener. All of these gentlemen, with H. W. Lanterman, were from the Kokomo headquarters. Another member of our staff came back in C43, entered by H. B. Shattuck & Son, of Boston, and operated by Benjamin Smith, manager of their Columbus avenue establishment. It was a strong and reliable vehicle, and though meeting with a mishap at Bridgeport, which delayed for an hour or so its entry into New York, it was a pleasant and comfortable trip throughout.

The moral effect of putting through an affair of this kind without a single accident is sure to redound to the benefit of the sport,

and lessen the impression that the automobile is a harm-dealing machine. If material advantage come to the trade, it will be the reasonable reward of the spirit and enterprise contributed to it. The loss which would undoubtedly have come from any failure is no longer a troublesome question; the success is already here. In the useful results, the promoting club and its responsible officials have a creditable share; they exercised direction and authority without the show of it, and thus avoided situations which might have been disagreeable. The element of outdoor enjoyment made the trip something in the nature of an outing, with the serious business of it, however, always in mind. And as for the fellowship which was shown on the road, a typical expression was one that passed between the operators of two big machines that had been looked upon something as rivals from start to finish. At their close finish in New York one remarked: "It *is* hard to pass or lose good people;" and the other, understanding, nodded his assent.

Not Powerful Enough

"Faith moves mountains," quoted the man who had been induced to buy a new kind of runabout through the faith he placed in the extravagant claims made for it by its manufacturer.

"Yes," assented one who had at one time done the very same thing, "but I've found you cannot depend on it to do the mountain trick with an automobile of this particular model and make."

FOURNIER IN HIS NEW LIGHT RACING CAR

Merely Explanatory

THAT those who are not themselves eligible to any of the following may still recognize what the words mean when they are applied to others, these few definitions are given for your benefit:

The Beginner.—The fellow who is always willing to take risks in an inverse ratio to his judgment.

The Club Boaster.—One who does his scorching almost entirely around a radiator in the winter.

The Hero.—The driver who can sit calmly in a 40 H. P. vehicle and allow himself to be passed by a noisy little grunting runabout, the idiot in charge of which has a look of contempt for the meagre pace of others in general and the hero in particular, of course.

The Hypocrite.—The person who objects to automobiling because he cannot afford to indulge in it himself.

The Philosopher.—The owner who can quote Plato and extol the teachings of Aristotle while being towed home after his new vehicle has come off twenty-second best in a disastrous conflict with a beer wagon.

The Chaperon.—An interesting personality of the stage coach days, but now a fading institution, being too aged to occupy the tonneau seat of a fast flying automobile in which the motoring maids of the twentieth century now delight.

The Tourist.—The sensible individual who takes the wine out of motorism and leaves the dregs for the scorcher and other eccentric personalities which go to make up the objectionable minority of the automobile fraternity.

The Policeman.—That august limb of the law whose eyes are ever on the lookout for such motovehiclists as cannot proceed fast enough to run away from him.

The Scorcher.—The fellow whose watch and odometer measure the pleasures of automobiling; the individual for whom the police say they are always watching but seldom capture—not yourself nor your friends, but the other fellow.

The Racer.—The one who takes all the possible pleasure of motoring, crowds them into a few moments on the road or the track, disposes of them for a silver cup, a few dollars or a trip in an ambulance.

Over Mud-Roads

By H. L. Aldrich

IN deciding upon the purchase of an automobile, I did as probably every other purchaser has done—sent out broadcast for catalogues. With me the conditions were unusual, I having only a right hand to do all the work called for in the running of a motor vehicle.

I did not find a machine that appealed so much to my eye and that suited my peculiar requirements so well as the Remington, which, being managed entirely by the feet, all else that it was necessary for me to do was to steer and to use the throttle.

This much decided, I determined to go to Utica and study the manner in which the company put the machine together, then to have the practical advantage of running it to New York. The weather was against the trip two or three weeks before it was undertaken, for at least two weeks of which it had rained, leaving the roads in horrible condition.

Even when we left Utica at one o'clock in the afternoon of Monday, September 29, the clouds were very threatening. Feeling, however, that there could not be much, if any more, rain, we started, and before we had gone half way to Frankfort, about nine miles away, the rain began. This, however, was a small part of our trouble, for the roads were all afloat with liquid mud, and almost the entire distance was made in mud from 2 to 6 or 8 inches deep.

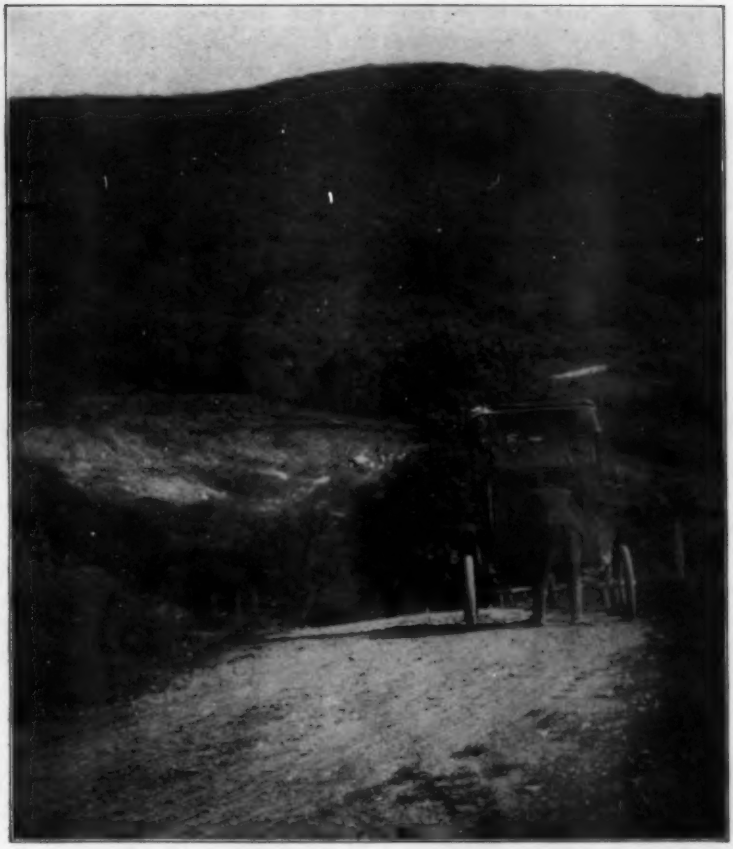
The farther on our journey we went, the deeper the mud seemed to be and the worse the roads became. As long, however, as the vehicle could stand it, I was determined to keep a-going. On the very steep and winding hill, just out of Herkimer, deep though it was with mud, we had no trouble whatever in climbing to the top of it. And so we went on, over-

coming all difficulties, up and down hill, through mud, until we reached St. Johnsville, the distance between Utica and there being thirty-two miles. The next morning we cleaned the carriage up, filled the tank with gasolene and waited, hoping that the clouds would break and that there would be some chance for pleasant weather. The prospects were hopeless, however, so we started at two o'clock and kept at it until we reached Fonda, twenty miles from St. Johnsonville.

Wednesday morning was no better with not the slightest hope of a change, so, in spite of the rain, before eight o'clock we were continuing on our journey. The western slope of Tribe's hill is not a very enviable incline to climb, especially with the mud several inches deep and a heavy rain falling. We went right up it, however, without apparent difficulty, although we stopped once or twice because of the heating of the transmission gear.

On the eastern or downward slope of the hill, men had been at work for weeks cutting down the grade, and before we realized the condition of things we were in the mud up to the hubs. It was the worst mess of clay and water without any bottom that could be imagined. To attempt to get out of this predicament by using the engine was hopeless, so we got a team of horses to tow us down to the bottom of the hill. By this time the automobile was a sorry sight. It was not only covered with mud about as thick as it could be laid on all over the wheels and the body, but even to the very top. We stopped long enough only to scrape off the worst of it and started on again. When we reached Amsterdam we stopped for repairs to our magneto, which had been soaked with mud and filled with grit, but not a thing else was wrong with the vehicle in spite of all the bad treatment it had been subjected to.

Within an hour we were off again, following the main road through the Mohawk Valley, arriving in Schenectady early in the afternoon, where we went to a stable to wash off the mud, cool the machinery and change the water in the tanks. The stable man advised us to continue our journey out State street, and the result of our foolishly following his advice was that we had one of the most outrageous hills to climb that was ever allowed on a public highway. Not only was this mountain deep with mud of clay, but there had been made, in some previous age, an attempt to pave part of the roadway with cobble stones and flagstones, while leaving great holes between. There was nothing to do, however, but



fight it out in that mud, and this we did, although the climb was a long and a hard one. Naturally, it was late when we arrived in Albany, it having taken nine hours for us to run only forty-five miles.

The distance from Utica to Albany, according to the records of the Endurance Test of September, 1901, is one hundred and seven miles, and we made almost all this by using the slow speed. I doubt if we were able to use the ordinary high speed clutch for more than fifteen miles of the entire distance. Despite it all we had no trouble of any kind with the engine or machinery outside of the magneto as related, and arrived in Albany in good shape.

By this time it really seemed to me as though it was right to have a change in the weather, but it was not to be. We waited until two o'clock next day, and then, thoroughly disgusted, we started for New York. After leaving Rensselaer, we took the road over the top of the hill, and if there was ever a hill that was intended to discourage automobilists, it is this one. There was nothing but thick clayey mud all the way to the foot of it and the entire hillside was every bit as bad as the road up to it.

There was 10.35 horse power in our little engine, and with only one or two stops to let the machinery cool, we reached the top of the hill and continued mile after mile plowing through mud which was oftentimes 4 or 5, if not 6 inches deep, until it was so dark we could neither see a guide post nor distinguish the road. We were too disgusted at the condition of things to care about calling upon the machinery any more that night, and, not having any idea what the roads ahead of us were, we hired a farmer to tow us into Kinderhook.

I had learned a good deal about the management of an automobile in the distance we had traveled, but I am free to confess there was not a great amount of pleasure in the acquisition of the learning. As the weather prospects did not improve at all, I left the vehicle at Kinderhook, and largely because of the interests of business went to New York early Friday morning and returned to Kinderhook Saturday night.

Even then the weather man was not on our side, although it was not raining when we left Kinderhook at half-past eight Sunday morning. Within an hour, however, the heavy mist had changed into a steady drizzle, and, by the time we reached Hudson, there was once more a steady downpour of rain. We were determined, however, not to give up as early in the day as it was, especially so long as the transmission gear held out, so we followed along the old Post road through the many changes until we reached Poughkeepsie at half-past four. It had taken us about nine hours to make something over forty-one miles, about forty miles of which must have been made with the slow speed.

Monday morning the sun really shone, but, in leaving Poughkeepsie, we found the deepest of mud all the way to Matteawan. From there, however, the roads were excellent all the way to New York. We reached Ossining about six o'clock. The next morning we were off for New York about eight and reached the Circle on Fifty-ninth street about half-past eleven.

The total distance from Utica to New York is about two hundred and fifty-six miles, and I think I am perfectly safe in stating that seven-eighths of the mileage, from Utica to Matteawan, was made using the slow speed gear. If any of your readers wish to go automobile touring for pleasure, I can speak with authority when I urge them not to attempt doing so during or immediately following two or three weeks of heavy rain.

Going down the river road from Matteawan to Peekskill, care should be taken not to lose the road as we did. After passing Garrison, we should take a sharp turn at the left, and we would have had an excellent road into Peekskill. There was no one to inquire of, and no guide board that we saw, so we went straight ahead, and, as a result, had to climb a very steep hill, paved mostly with mud and rocks, making the poorest kind of a road. This hill must be at least three-quarters of a mile long, and it is very nearly as steep as the side of a mountain. How any automobile can ever climb such a thing is a mystery. We went right up it, however, with only two stops.

Thursday evening we made the run from Albany to Kinderhook, a distance of about fifteen miles, in five hours, including the climb up the long and very muddy hill out of Rensselaer, and we thought that this was rather slow work. The next day, however, we encountered a touring car, which had a 28 horse-power engine, and which, with all that had only been able to make five miles in about eight hours over roads not nearly so bad as those which we passed over, and upon which there was no hill to compare with the one out of Rensselaer. We felt, therefore, that we really had accomplished quite a little.

One great disadvantage of the roads west of Albany is that they are universally poor, apparently receiving very little, if any, attention. In all the townships there seems to be pride in having as poor roads as possible. Between Utica and Albany I doubt if we saw half a dozen guide boards along the entire route. Added to this, was a still greater disadvantage in that the people along the route seemed to know nothing about the roads. Even livery stable keepers seemed to know very little about the condition of the roads or their direction. The most aggravating case that we met was about eight miles north of Kinderhook, where an old gentleman said in reply to my inquiry about the roads further on toward Kinderhook: "Well, my friend, I haven't been to Kinderhook for over forty years, but last time I went down the road was pretty good, and I think there was a good hotel in town."

One surprise, which has probably come to all touring automobilists, was the fact that a good horse shies but little at an automobile, while an old plug of a farm horse, that is scarcely more than a bag of bones, will perform all sorts of antics, even to attempting to stand on his head.

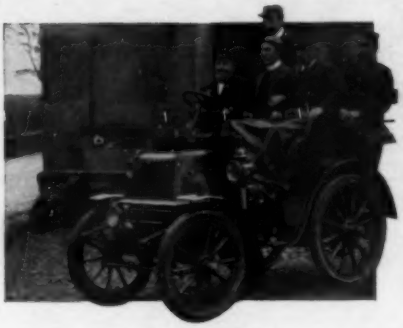
We had many interesting little experiences here and there in trying to find accommodations and in order to get something to eat. In one little village we went to the only "hotel." The only place to wash was in the barroom, and there we were greeted by a huge sign, "Wash Before You Wipe." So far as we know, we only killed two yellow dogs, and it so happened that both of them were in Peekskill.

It was unfortunate that the weather was bad all the time, so that I could not get the few photographs which accompany this story.

As a final word to beginners, I would suggest that if they wish to learn thoroughly all there is about an automobile, they will find the quickest way of doing so to go off on a considerable trip where all sorts of conditions will be encountered, and an excellent opportunity had to study the vehicle at its worst. Now that the trip is over, I feel that nothing could have given me as much real information regarding the vehicle I own as my several days' experience with it over the mountains and through the mud of New York's alleged country roads. I am especially gratified that I selected the vehicle that I did, for in spite of all the wrenching and the hard work it was given, we reached New York without any engine trouble whatever and with everything else in most excellent condition.

Automobiling in Scotland

By Angus Sinclair



READY TO START

THERE is a beautiful stretch of country in Scotland called the Valley of Strathmore, which extends through the shires of Perth Angus and Mearns. The traveler going from the romantic city of Perth to Aberdeen, the Granite City, traverses the whole length of the valley of Strathmore. If he has an eye for the beauties of nature, he will enjoy a feast throughout the whole journey, for nature has been lavish in her gifts to this region and man has labored to bring them into harmonious evidence. Clear crystal streams and silvery lochs are mixed with spreading woods and give variety of every hue to the fertile fields, from the golden wheat, through all shades, to the deep green of the bulbous crops and the purple gleam of the blooming heather.

For months I had been mentally arranging to make Laurencekirk, a most attractive spot in the Braes of Mearns, the rendezvous for various automobile tours through the most romantic and picturesque parts of Scotland. But as my native bard tells us

"The best laid schemes o' mice and men
Gang aft agley,"

and mine fell through ridiculously.

To go on an automobile touring expedition the use of an automobile is indispensable. I took for granted that there would be no difficulty about hiring an automobile, for there are several large towns within reach where automobile hiring has been popular for several summers. After I had made arrangements for a series of attractive tours, and invited divers friends to take part in the enjoyment, I discovered that no automobile, or motor car as they are called in Great Britain, could be obtained for two months, an eloquent testimony to the popularity of automobiling in Scotland. The kindness of a private owner relieved the situation a little and permitted me to see some parts of my native country from the seat of an automobile.

This region, like all the other hill and mountain districts of Scotland, is full of romantic spots that are hard to reach, sylvan glens and steep sided straths that form the finest jewels of the mountain scenery, but which are, like nearly all other precious things, hard to reach. There is within easy reach many a moldering ruin with picturesque surroundings that charm the eye, and historical associations that stir the emotions of every lover of his race, but they are almost inaccessible to ordinary locomotion. Many a time that I have ridden to view romantic scenes, the emotions naturally excited by the places have previously evaporated in compassion for the poor horses. The glory of riding in a motor car is that its efforts excite no pity.

The wide view across the Braes of Mearns gives a general idea of the appearance of the country, but it does not show the details of many a steep brae like those seen in the Clatterin Brig view. But there are many such braes encountered in a day's run that would have to be climbed on foot if horses were the motive power.

It is amusing how ready drivers of tourists' coaches are to tell their load to get down and walk at every steep part encountered. Later in the summer, in the course of another tour, we went by coach from a place near Loch Awe to Inverary. The distance was about fifteen miles and the willing walkers had the privilege of doing about a quarter of the distance on foot. In a lesser degree a visit to the Trossachs brought similar exercise.

Besides being one of the most picturesque regions of Scotland, these Braes of Mearns have been the stage where many of the most realistic dramas in the history of Scotland were enacted. When the country was going through the process that amalgamated a host of warlike clans into a nation, some of the most powerful thanes, or maarmors, as they were called, had strong castles for their treasure boxes, and fierce retainers as capital. They were the original trusts. The ruins of many such strongholds can be encompassed in one day's automobile journey through Angus and Mearns.

About the period that Shakespeare lays the tragedy of Macbeth, the Maarmor of the Mearns ruled in Kincardine castle with as much authority as King Duncan was supposed to have ruled at Glamis, thirty miles away. The Maarmor of the Mearns had a fierce wife named Finella, who murdered King Kenneth with her own hand in revenge for the death of her son, who had been slain by the king's followers. This Finella must have been a real personage,

for the valley is full of traditions about her deeds, and several places are called after her, among them the prominent hill shown in the picture of the Braes of Mearns. The ruins of the castle are still there and were part of our pilgrimage.

The roads were in superb condition—ideal highways for automobilists. There were no obstacles to the highest speed the car could make, and there were few vehicles to slow up for, so every hour took us over many miles, unless we stopped to examine places of special interest or to admire at leisure striking scenes.

A pleasing sight it was as we passed along to observe the careful maintenance of the roads. Every mile or so was to be seen a

THE BRAES OF MEARNS

cairn of broken stones in a recess at the side of the road and on many of them worked ancient natives, cracking away with busy hammers to keep up the supply. The roads are regularly inspected and, whenever a spot shows signs of weakness, it is patched at once. It is a good illustration of the stitch in time saving nine.

This policy of keeping up the roads is strictly followed all over the British Isles. Even in the thinly settled Highlands, where human habitations are rarely seen, the roads are kept up as well as they are in the most populous districts.

We followed to the Clatterin Brig the road which leads over one of the Highland passes through the Grampian hills and then we turned to the right into the real Drumtochty Glen. The glen is about three miles long, between steep hills, beautifully wooded or

CLATTERIN BRIG

clad with heather and is the prettiest three miles I have ever traversed. Nearly all the hills seen from the Clatterin Brig are covered with a robe of unbroken purple heather, that make charming scenes, but a photograph fails to reproduce their beauty.

There is a curious thing connected with this name Drumtochty. In the Mearns it is a real name, but it is used by the novelist Ian Maclaren as the name of an imaginary glen in Perthshire where the novelist, not to the Scots dialect born, tries to make the inhabitants use language that no real Lowlander ever talks. Some of his mistakes are as ludicrous as those made by the Highlanders more familiar with their native Gaelic than with English. Highlanders are a proud race and often when together pride themselves in displaying their familiarity with the English tongue. The story is told that three of them were discussing a bottle of whisky together and one, holding up a glass, remarked, "That is the best drop of whisky I ever tasted any more before." The next one says, "And so did I whatever," while the other remarks, "And neither did I, too."

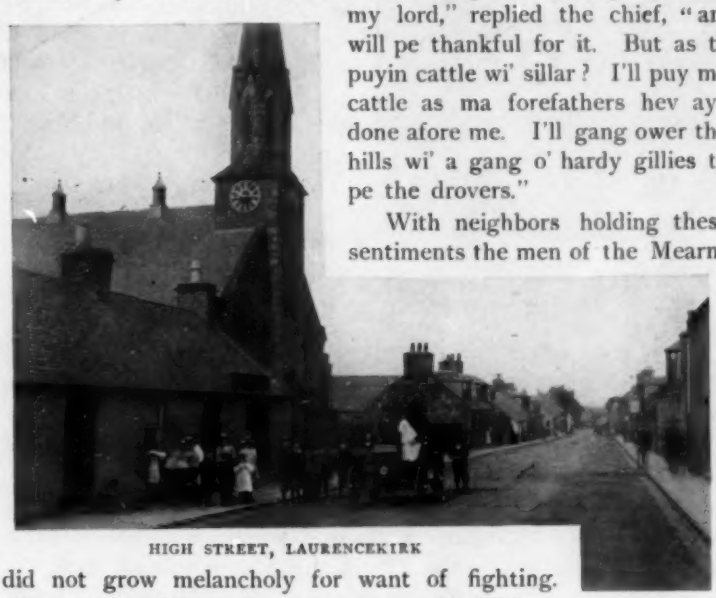
The road we followed to Drumtochty is one of the most ancient highways in Scotland and led through a much-used pass between the Lowlands and Highlands. Kincardine castle was built at the mouth of the pass to put restraint upon the inroads of the breekless Celts from the other side of the mountains. The wide-spreading pastures of Strathmore were famous for the herds of sheep and black cattle raised upon them, and were an irresistible temptation to the hungry Highlanders whose heather-covered hills provided scanty food supplies. The result of these conditions was a constant conflict between the comparatively rich and the positively poor. Society in those primitive times followed

"The good old rule, the simple plan,
That he should take who had the power,
And he should keep who can."

The ideas of Highlanders of good Christian training and hold-

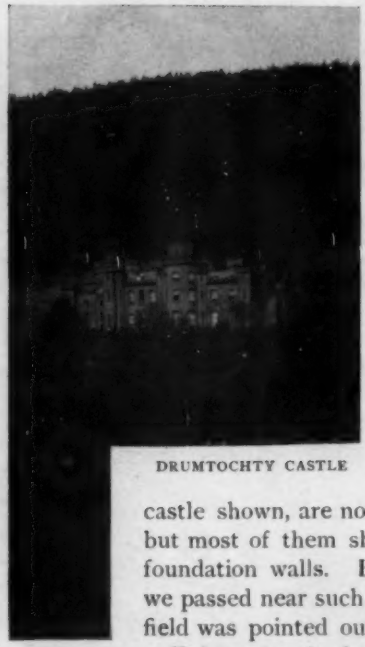
ing sound moral principles about other things were quite peculiar in regard to peripatetic property. It is said that when the Marquis of Montrose, a famous general of the seventeenth century, was passing through a Highland district he found a clan that had been robbed of all its possessions by plunderers who had escaped beyond reach. Montrose offered the head of the clan money wherewith to buy a new stock of cattle and sheep. "I'll tek your siilar, my lord," replied the chief, "an' will pe thankful for it. But as ta puyin cattle wi' siilar? I'll puy ma cattle as ma forefathers hev aye done afore me. I'll gang ower the hills wi' a gang o' hardy gillies to pe the drovers."

With neighbors holding these sentiments the men of the Mearns did not grow melancholy for want of fighting. They had the Highland reivers on one side, and on the other the North Sea, which brought periodic hoards of sea robbers, who swarmed upon the land like a hurricane and left the homesteads bare of everything they could carry away.



HIGH STREET, LAURENCEKIRK

Practice makes perfect and the Mearns men became famous for their prowess in defense and offense. There is a Scots saying, "He did his best, and even a Mearns man could do nae mair." The old kings of France, from the days of Charlemagne, maintained a regiment of Scots gentlemen who were body-guards in time of peace and leaders in time of war. The Mearns men were always well represented in this regiment. The training to arms, which was their natural inheritance, made them a race of soldiers and specimens of the Dugal Dalgetty type were to be found in every army of Europe. The home supply was too great for the



DRUMTOCHTY CASTLE

native positions, and the sons of the land for many generations have come to look abroad for opportunities of employment, not only in war but in peaceful pursuits.

The valley of Strathmore, being a fairly level country, there are few natural fortifications in it where the inhabitants could easily defend themselves in case of attack, and so the laws of grim necessity compelled the leaders to build strongholds for the defense of their own and the property of their dependents. The ruins of places, like that of Edzel castle shown, are now to be found all over the region, but most of them show only moldering fragments of foundation walls. Every few miles during our tour we passed near such interest marks, and many a fertile field was pointed out as the scene of some conflict of sufficient magnitude to be marked by a stone or cairn, while the victory or defeat stamped itself deeply enough to have the story carried down by tradition through succeeding generations.

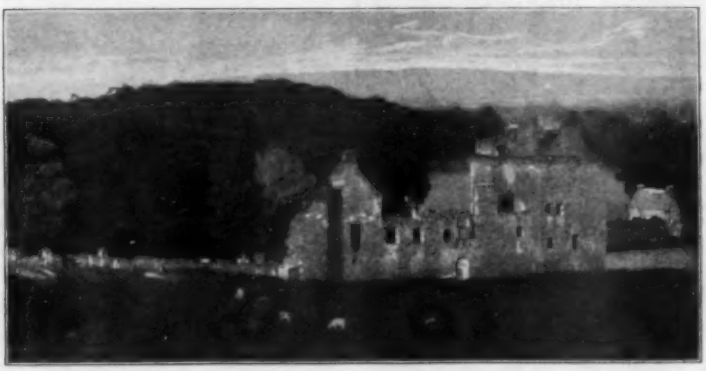
Christianity is said to have been introduced into these parts in the ninth century and it was gradually well supplied with religious houses. There are many churches remaining, but few ruins. The religious persecution that disgraced other parts of the lowlands did not disturb the Mearns. The people were tolerant with each other in religious matters, and there was no disposition displayed to throw stones at those who differed in faith or in forms.

The leading characteristics of the people were sturdy independence and active industry. Savage instincts were by no means obliterated and their habit of defending themselves from the inroads of Highland caterins taught them to defend themselves against the injustice of domestic tyrants. A story is told about a despotic sheriff who ruled high and low with a tyrant hand that knew no law. Complaints about him had been repeatedly carried to the king, who in a moment of impatience exclaimed, "Sorrow gin the sheriff wase sodden and supped in broo," which meant I wish he was made into broth and the broth supped.

The complainants had got what they wanted. They arranged for a great hunting party and had a huge caldron constructed. The sheriff was invited here to a feast and the scene that ensued was not unlike the incident described in the Bab Ballads:

"And he stirred it round and round and round
And he sniffed at the foaming froth;
When I ups with his heels, and smother his squeals
In the scum of the foaming broth."

The Stuart king of that time had little sense of a joke and did not like snap judgment being taken of a hasty expression, so he



EDZEL—AN ANCIENT CASTLE PASSED EN ROUTE

diminished the population of the Mearns by cutting off the heads of all the men engaged in cooking the sheriff.

That is all I shall venture to inflict upon the readers of the AUTOMOBILE MAGAZINE about the Braes of Mearns in this number. Will inflict a little more in next issue.

Ahead of His Time

"I have been thinking," observed Brutus, "what a fine speedway for automobile scorching this Appian Way would make."

"But you seem to forget," sneeringly replied Cassius, "that automobiles haven't been invented yet."

That was too true. Brutus was in advance of his time, and, drawing his toga about him, the noblest Roman of them all relapsed into his customary pessimistic brooding on Cæsar's political ambitions.

British Reliability Trials

By A. F. Sinclair

THE principal event of the A. C. G. B. & I. annual program began on September 1, and at the time of writing, early in October, it is still in progress.

Beginning on Monday, September 1, the trials of cars continued during the week, but, although it had been intended to finish the test of tires on September 25, after they had covered 3,000 miles in four weeks, the condition of two sets, Dunlop and Collier, were so equal at the finish of that distance, that it was decided to run another 1,000 miles.

The contest, as a whole, has been exceedingly successful and has demonstrated clearly the great advance in reliability, both in cars and tires, made during a brief twelve months. It is true that while in the Glasgow trials last year four cars succeeded in securing full marks for the whole five days, while on this occasion only one obtained the entire 1,800 marks for the six days; but this is accounted for by more stringent conditions of observation, and by the fact that on this occasion marks were deducted for stoppages from tire trouble.

The Crystal Palace, Sydenham, in the County of Surrey, is the building in which the first exhibition was held in 1851, when it was located in Hyde Park, London. It is about ten miles from London Bridge station, and is the scene of many social, musical, athletic and sporting meetings every year. The accommodation, both in the building and grounds, is extensive and beetling with conveniences. No more suitable place could have been found, then, than this for starting from and storage, and as the country to the south presents a variety of surface, with a few

sufficiently steep hills, the run was, on the whole, a highly desirable one.

On each of the six days, beginning with September 1, the cars left the Palace in the morning and returned, if able, before night. The first day's run to Folkestone and back, covered 139½ miles; Tuesday, Eastbourne and back, 120 miles; Wednesday, Worthing and back, 120 miles; Thursday, Brighton and back, 87½ miles; Friday, Tonbridge was the furthest point, but the route was of a circular form, and included hill-climbing, distance, 61½ miles; Saturday, Bexhill-on-Sea and back, 121½ miles; total distance, 650 miles. As has been already suggested, the country is undulating topographically, and in some cases the test was of the severest. On Friday, for instance, in proceeding along a lane, with a number of cars in close order, "the bottom seemed to drop out of the road," as one writer put it, and the drivers found themselves compelled, without the slightest warning, to negotiate a down-grade of about 17 per cent. That they got down all right is valuable evidence of sufficient brake power.

But to start at the beginning, usually a wise proceeding, the cars had to be in the custody of the club at the Crystal Palace at noon, August 29, under a penalty of disqualification, and this rule (except in the case of a single car whose owner was able to prove that he had been at the wrong gate in good time and was refused admittance) was rigidly adhered to. Cars which reached the gate a minute or two after noon were disqualified, and it is not altogether creditable to the sportsmanlike feeling of some of the competitors that, although they had been emphatically warned of the consequences, they resented them like children.

From noon till late on Friday evening was occupied by the judges weighing the vehicles, sealing tires, and in work of examination. On Saturday the cars were subjected to an up and down brake test on a 14 per cent. grade in the Palace grounds, a test which discovered some weaknesses, but on the whole the result was highly satisfactory.

On Sunday the examination work of the judges was concluded, and early on Monday morning in the midst of a "Scotch mist," a kind of drizzle, more soaking than a downpour, the business portion of the contest was got under way.

In all 92 cars were entered, of which 88 were classified, but only 61 started. In addition, however, there were 12 cars carrying various makes of tires entered, of which two did not start. The

starters were then 71 in all, the 61 in the car competition being divided into classes according to price, as follows: Class A (cars or cycles), selling price, not exceeding £150; Class B (cars only hereafter), price, not exceeding £200; Class C, price, not exceeding £300; Class D, price, not exceeding £400; Class E, price, not exceeding £500; Class F, price, not exceeding £600; Class G, price, not exceeding £700; Class H, price, not exceeding £800; Class J, price, not exceeding £1,000; Class K, price, not exceeding £1,200; Class L, price, exceeding £1,200.

The trials being for touring cars only, each had to carry its full complement of passengers, who had to weigh on an average 147 pounds each, that weight being made up, if necessary, by ballast, which could be neither tools nor accessories. No flimsy makeshift seats were permitted, every portion of the vehicle requiring to be in the condition in which it would be when delivered to a customer.

The observers were the nominees of other makers, that is to say, every competitor was required, under the risk of disqualification, to nominate an observer for each car entered, such observer to change cars each day, but on no day to act on cars entered by their nominators. This plan was found to work well, in that it secured the most exact observation of the cars, and as the regulations provided for an appeal to the judges against any deduction recorded against a car, should the driver consider such deduction unjust or excessive, it operated with perfect fairness.

The first day's run to Folkestone, although long and trying, only succeeded in demonstrating radical weakness in two cars.

Of the 59 which finished, 21 succeeded in obtaining the maximum of 300 marks, while many of the deductions from other totals were from extremely trifling causes, a stoppage of the motor for 10 seconds in one case, for instance, causing the deduction of a minute, or one mark. Only five stoppages for tire trouble took place, and here it may be mentioned that throughout the week only 25 stoppages from this cause occurred, and as this is equal to one stoppage in two weeks for each car, it is evident that the claim of vast improvement in pneumatic tires is justified.

Tuesday's run to Eastbourne, 120 miles, was, in some respects, more trying than the preceding, as it included the well-known Westerham hill, an elevation favored for hill-climbing contests by the British Automobile Club. Only 58 vehicles started, (6) a Werner motor cycle being the defaulter, and of these 54 finished.

About one-third of those finishing, 17, to be exact, secured the maximum, while from 25 others, the aggregate of deductions was 91 marks, or less than 4 marks each car on the average.

Wednesday's run to Worthing was, comparatively, an easy one, for although the distance, 120 miles, was the same as on Tuesday, the conditions were less arduous. Of the 54 cars that started, all finished, and 23 of them earned the maximum.

On Thursday, again 54 cars started for Brighton, and all returned, 36 of them receiving full marks. On this day the cars did their best day's work, for of the remaining 18 cars, 11 had

EARL OF SHREWSBURY AND TALBOT'S 16 H.-P. CLEMENT

deductions aggregating 49 marks, or 4½ marks each on the average.

Friday was devoted to hill-climbing and competition trials, the distance covered being but 61½ miles. Fifty-four cars started, but only 50 finished. Of the 50 that finished, 26 cars were successful in securing the full marks.

The Bexhill run on Saturday brought the contest to an end, so far as running was concerned. Of the 50 cars that started on this run of 121½ miles, all but one returned. Of the 49 cars that returned, 25 lost no marks, while 18 others had deductions of five marks each on the average.

The only car which obtained the full marks each day, aggre-

gating 1,800 marks for the entire six days, was a 20-H. P. Wolseley, the same make of car as won two gold medals at the Glasgow trials. Three cars lost only one mark, finishing with 1,799 of an aggregate. These were a 5-H. P. Peugeot, which lost a mark for ignition trouble on the first day; a 6-H. P., an American White steam car, which dropped a mark on Thursday for being a minute in excess of the two hours allowed in garage for cleaning and taking in fuel; and a 15-H. P. Panhard, which gave away a mark on Wednesday for changing over accumulators. It is not proposed to go further into causes of deductions, but the official table showed that none of the cars lost only two marks, two lost three marks, and three lost only five marks.

In addition to the marks awarded for (1) reliable running, five other qualifications were considered, namely (2) hill-climbing; (3) condition of car at conclusion of six days' running, maximum 500 marks; (4) steering, 250 marks; (5) brakes, 250 marks; (6) horse power and weight.

Glasgow, Oct. 4.

Where Peter Went With Horses

Copenhagen possesses a circular tower 100 feet in height, which was formerly used for astronomical purposes. Its top is only reached by ascending a spiral passage 12 feet broad which winds between the outer wall of the tower and an innner circular wall. From the base to the top it is entirely without steps and the gradient is seven inches per ell.

An automobile of five horse-power, and carrying three persons, ascended the tower recently, taking one minute for the journey, and afterward making the much more dangerous descent with equal success.

It is of interest to recall that the Czar Peter the Great, on visiting Copenhagen in 1716, made the same ascent and descent in a carriage drawn by four horses, which feat was really a very much more daring one than that of the automobile.

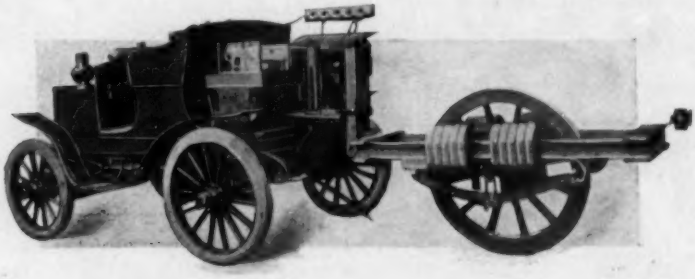
It Sometimes Happens That Way

"Did you go for a ride in that new steamer of yours yet?"

"Well, it was a ride when I started, but it turned into a walk long before I got to the repairer's."

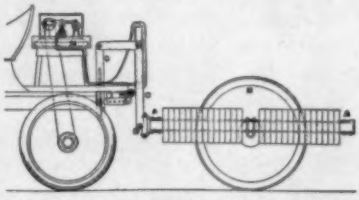
Measuring Road Traction

PASSED never to return again is the day of guesswork (in the proper designing and constructing of a motor vehicle). To-day what a vehicle can and must do are not things to be roughly and inaccurately estimated, but things which must be determined with mathematical exactness. No better illustration



of this can be found than the recent paper on "The Resistance of Road Vehicles to Traction," read by Professor S. H. Hele-Shaw, F.R.S., before the British Association.

In the securing of the data upon which to base his address Professor Hele-Shaw made use of the automobile here shown, equipped with a very ingenious combination dynamometer and recording instruments.



Briefly the apparatus comprises a caster frame, AA, in which can be mounted, either with or without springs, a series of wheels varying in size from 18 inches up to 5 feet in diameter. This frame can be loaded by steps of 56 pounds up to about a total weight of one ton. The frame containing the wheel, B, is attached to a motor car or any other form of tractor by a system of levers, C C, so arranged that any desired angle of draught can be obtained for every size of wheel. A universal joint, D, is inserted between the frame and the car, so that the frame is free to move in two directions, i e., it can vibrate vertically, as over rough ground, and it can follow the car freely round a curve without in any way affecting the records. The tractive force required to draw this experimental wheel is transmitted through the system of levers to a

small ram, E (2.6 inches in diameter), which presses upon a rubber diaphragm inclosing a space filled with water or other liquid. As the tractive force varies so does the pressure exerted by the levers on the ram, and consequently on the inclosed liquid. This varying pressure is registered by a recording pressure gauge of the Bourdon tube type, and since the drum of this instrument is rotated in accordance with the movement of the car, the resulting graph shows the tracttive force at all points of the route.

Story of Number 134

By Ned Willson

(Begun in September issue.)

IF you looked over the map of the State of Ohio and tried to find the town of Cinderella it might tire your eyes before you succeeded. Perhaps that is not just the right name of the town in question, but anyway, it will answer the purpose of this story. There is a little wooden depot on one side of the railroad track with the name of the town in great letters, flanked on either side with the distances to the nearest city of importance, ornamenting a long white board over the door. At least the board was originally white, but now of a dirty, grayish hue. Across the track from the depot a small red building surrounded with a platform about three feet from the ground constitutes the freight depot. In the offing are numbers of oil derricks, with here and there a little shed from which comes the labored puffing of a gas engine. Extending outward from these sheds like the legs of a "Daddy-Long-Legs," and swaying back and forth are the shackle rods by which from one engine a great many wells were pumped at once. It is the midst of the oil field.

Walking up and down the depot platform one morning were two men, one clad in uniform which denoted him to be the station agent, and the other, a tall, spare man in a leather coat and an automobile cap. The latter was gesticulating fiercely, and every little while waving a small yellow paper with his left hand and then slapping it viciously with his right. An inspection of the paper would have shown it to be a bill of lading of the P. D. Q. R. R., with its usual heading in small print, and an inscription in blue pencil denoting that "one automobile, weight 4,000," had been consigned to Mr. Cyrus P. Johnson, of Cinderella, Ohio.

"I tell you, Bradley, that blamed machine ought to have been here long ago. Just think, it was shipped a week ago to-day and a

tracer sent after it three days ago, and nobody seems to know where it is."

"Do you know the number of the car?" the station agent asked.

"No, sir; I don't know what car it was on because I didn't ship it."

"I can't imagine what could have happened unless she got in that wreck down the line the other day. Gosh! that was the prettiest wreck you ever saw. The engine and two cars just got across the creek when the trestle went down and seventeen cars piled up in the bottom of a ravine fifty feet deep. Nobody was hurt 'cause the caboose stayed up, but I tell you, there was a nice mess of kindlin' wood and old iron when they come to haul the cars up. Part of the wreck caught fire, and——"

"Oh, cuss your old wreck," answered Mr. Johnson, nervously. "I wish the whole blamed road would run off the track. I don't believe it's no good, nohow."

"Well, I guess that's where your machine went to."

"Aw, I don't believe it; I believe she's sidetracked somewhere."

Just then an engine whistled for a crossing about a mile away, and the agent remarked, "Well, there's the local now. If they haven't got your machine on we can send another tracer and I'll ask the agent nearest to the wreck if he knew of an automobile being found in any of the cars. Hullo, he's just sending through a list of the damaged goods now," and with a sign to his companion to be quiet he muttered over mechanically the purported message. "Huh! One automobile consigned to—hello, somebody's cut in." Mr. Johnson turned red and white by turns, and then asked pettishly, "Well, man, hurry up. Who was she consigned to? Is it mine?"

"I said somebody cut in. Didn't get the rest of it. Well, so long, I must tend to the local now; maybe it wasn't your machine after all."

Scarce able to curb his impatience, the man in the auto suit paced back and forth, watching the trainmen as they cut out three cars and pushed them on to the siding back of the freight depot. "Well, did you get her, Bradley?" he asked of the agent, as he was unsealing the last car.

"Don't know yet. Here's a whole lot of sucker rods, a couple of mowers; this car here is loaded with household goods, and—say, what's that funny lookin' wagon in there with the wheels all tied around with fire-hose?"

"Oh, you blame fool, that's an automobile, that's my machine.

That's number 134. There she is. Didn't you ever see an automobile before? You're the blamedest fool I ever see."

"Ain't no more fool than you be. You're so excited you don't know your head from your heels. Well, I guess you want to get her out right away. Go over to the depot and get the hatchet while I get these crates out the way."

It was short work to unload a few crates of furniture piled in front of the machine, and to knock away the blocking that held the vehicle in place, and without more adieu the machine was rolled out of the car and down to the ground. "There she be, Bradley. Ain't she a dandy?"

"Pretty good looking carriage, I should say. Let's see you start her up."

"Guess I'll kind o' look her over first. Say, just keep your eye on her a minute till I go over here to Peterson's and get some gasolene." Bradley stood guard nothing loath, poked his fingers into the cushions, tried to peek through the hood and to look through casing of the transmission gear, got his fingers covered with grease feeling of the chain, and satisfied his curiosity as best he could without pulling anything apart. By the time its owner returned, the machine was the center of a crowd of at least twenty-five men and boys who had collected like buzzards around a newly found carcass. Bradley, faithful to his trust, had specified "no monkeying," and all stood at a respectful distance. As Mr. Johnson approached there arose a chorus as if from one voice, "Say, Cy, give me a ride, will ye? Gosh, she's a beaut, ain't she?"

"Say, what do you fellows think I'm running, an ambulance?"

"Naw, we ain't no cripples."

"Well, you will be if you don't keep out of my way, as this here machine runs forty miles an hour." A long-drawn whistle was the only response. Raising up the seat to fill the gasolene tank he found fastened to the screw top of the tank a piece of paper with the inscription, "Don't forget your water." "Sure enough, I pretty near forgot that," he muttered to himself. "Here, Billy, get me a pail of water," to a freckle-faced youngster standing by.

"Gimme a ride?"

"Yes, if you will get me some water and hurry up." While waiting for the water and with his instruction book in one hand he went carefully about making his adjustments, oiling up, etc., and then essayed to start the engine. Turning on the gasolene and the igniter switch, he gave the crank three or four turns and secured an ex-

plosion which carried the engine through seven or eight revolutions when it got another explosion. This gave it impetus enough for another dozen revolutions which were followed by another explosion. But the third explosion was the last and the engine stopped. Another attempt brought a similar result, which was not bettered by repeated trials. Although the spring day was raw and cold, the exercise, coupled with the sympathies of the crowd, soon made the oil man look like he had been through the sweat-room of a Turkish bath. Try as he would he could obtain no better result, and on the pretense of going home after a screwdriver he had a good look at his instruction book and finally found this paragraph: "If your engine runs with infrequent explosions either the mixture is not right or it is throttled too much. First try opening your throttle a little further and then adjusting the mixture." Back to the machine he marched proudly with the screwdriver in his hand in order to make good his bluff, but when he arrived his spirits fell, for he had forgotten which was the throttle. He had to do something, however, so he made a pretense of tightening up a screw here and loosening one there while tracing up the various levers in order to find which was which. Following two rods, each of similar design, he found that they led to a couple of small handles on the steering-post. A glance at the illustration on the instruction sheet showed him that one was the throttle and the other the spark advancer, but which was which he really couldn't tell. "Guess I'll pull 'em both," he said to himself; "then I'll surely get the right one."

Determined not to be balked again he gave the starting crank a quick turn, when it started backwards with a jerk, taking him off his feet and throwing him about two yards from the machine. He sat down so hard that the air was filled with jump-sparks. Three or four of the bystanders went to his assistance, but he recovered without any help, and, after nursing his "funny bone" for a moment, he came to the conclusion that he had done something wrong and consulted the instruction book once more. At last he discovered that when the engine started backward the igniter had too much lead and the spark advancer must be thrown forward in the direction the engine turned. One of the oil-pumpers from his lease, who was standing by just then suggested that he allow him to start the engine and at the same time volunteered what he had already discovered, that "She was igniting too soon." Mr. Johnson consenting, the experienced gas engine runner soon found the spark advancer and pushed it forward as far as it would go. Finding that the

engine cranked rather hard he looked for and discovered the relief cock, and, opening it, gave the crank two vigorous turns when the engine started off as if it had never known what it was to balk. Then closing the relief cock and advancing the spark he stepped back, and Mr. Johnson, replacing the hood, took his position proudly at the steering wheel.

With his eyes to the front like a soldier on dress parade he threw in the low gear and applied the clutch gradually, suppressing his nervousness with gritted teeth. It was fortunate that the steering wheel was made of sound material else it would have been crushed by the terrific grip with which he held it. Guiding the machine with a determination due as much as anything to the fear of ridicule, he started down the road without running into any of the yawning chasms in the faces of the admiring crowd. Choosing an unfrequented road he made a run of four or five miles, and managed by dint of hard labor at the wheel to keep the machine out of the ditches on either side. His track was anything but straight, but for a novice he did fairly well, and, beyond crushing the life out of a stray hen, he caused no accident. Turning about he reached home safely, guiding his machine into the barnyard and barely missing the gate, ran into the barn, intending to leave it there while he could study his instruction book and look the machine over undisturbed.

It is said that fate favors the drunkard and the feeble minded, and she surely must be kind also to the ignorant, for it must have been fate and fate only that saved his machine from a wreck. The door on the opposite side of the barn from where he entered was about six feet from the ground and was wide open. In attempting to stop he threw out the clutch but forgot to use the brake, and the machine was fast approaching the open doorway. The hub of the front wheel striking a post upset a pile of baled hay, which fell in front of the vehicle and wedged itself across the open door. This acted as an effectual stop at the expense of the radiator, which was quite badly twisted out of shape. The owner was so frightened that it was some ten minutes before he could think to stop the engine. The accident caused him to sit down and give some serious thought to the question of learning how to operate the machine by himself. His narrow escape gave him a better conception of the difficulties in hand, and that night when writing for a new radiator he added a request for an expert instructor to stay with him a few days until he could get the machine well in hand.

A Tale of "Whoa"

MORNING

Goodby, old horse, we'll turn you out
  To roam o'er hill and plain;
We've bought a brand new steamer and
  We'll ne'er need you again.
With boiler, steam and gasolene
  We'll ride from morn till dark,
And on each pleasant afternoon
  Go whizzing through the park.
You're hardly worth a piece of pie!
Goodby, old horse, goodby!

EVENING

Come here, old horse, we need your pull
  To get us home to-night.
This machinery, complex, puffing thing
  Is not perfected—quite.
Ten miles from home it fussed and fumed
  And then refused to go;
And minus both a push and pull
  It was a case of whoa!
If you'll return, so will our joy.
Good boy, old horse, good boy!

Concerning the Induction Coil

By Reginald Wales

THE relation of the induction coil to the motor is an extremely delicate one and should have the earnest consideration of every gasolene motor owner. That these two factors be ever in harmony, that they always be positive, is imperative to the well-regulated vehicle. Perhaps the motor itself cannot be classed or considered antagonistic, but rather should be regarded as being continually subservient to certain ignition conditions brought to bear upon its centers. These are always manifest and cannot be mistaken, so embarrassment should never be experienced in their detection.

The batteries may be in a perfect and normal condition and yet there is a motoric failure, due, let us say, to encrustated sparking points. Then again, the series may be the negative quality while all other component parts are in a faultless state. But, to take still another illustration, assume, for instance, a condition where collectively the cells, the transmission wires, the switch and the sparking points admit of no question as to their integrity, but are, on the contrary, working nicely upon a basis of co-operation; in short, all factors entering into and comprising the ignition centers are in a faultless condition with the exception of the induction coil, yet as a result of this one deviation what is the result? Obviously the vehicle will be rendered useless. Why it will be rendered so I trust will be explained in the following brief discussion of the uncertainties of the induction coil and the evils attending its depreciation.

The construction of the induction coil is not particularly complicated, consisting primarily as it does of a thick wire of few windings so as to offer but small resistance and a small co-efficient of self-induction. The secondary coil surrounding the primary is of a thin wire, its length varying according to the size of the completed coil. In order to avoid the danger of a disruptive discharge between the parts of the insulated wire, the coil is divided by an insulating septa so that parts of very different potentials are separated. In the center of the primary is placed a bundle of iron wires; this greatly strengthens the electrical action, and a great deal depends upon the quality of the iron, which should by all means be soft.

An alternating vibratory or purely alternating current through either one of the wires induces a flow of electricity in the other, provided, however, its ends are joined in or through some conducting substance. Therefore, in the passing of the energy through a wire

of large diameter a strong potential, comparatively speaking, is obtained at the fine winding. It is this which causes the production of a large and uniformly thick spark.

While the coil necessarily brings much influence to bear upon the spark's volume, yet the batteries must not be overlooked as being directly influential. Satisfied that these are of the proper type and so constituted as to make possible their surviving protracted and exacting periods of service, and that their present condition permits of no doubt as to their normal propagating qualities, then all attention should unhesitatingly be centered upon the induction coil.

The requirements of the coil are that it must first be of proper and suitable size for the particular motor which it is identified with, and, second, its composition must be such as to offer a resistance to the product from the batteries, making it quite impossible for the entire quantity generated by the series to pass through its medium. If there is a failure to maintain this latter condition, then the cells are always subjected to a debilitating drain because of the maximum amount of energy which they are thus called upon to produce.

For example. The series being capable of producing a certain number of amperes, maximum, say two, then a mathematically exact induction coil should not permit this quantity to pass interruptedly through its windings, but should, on the contrary, resist or turn back a portion of it. Of the two amperes generated by the batteries, not more than one-half should by the coil be allowed to pass through and on down to the ignition centers. If this ratio is maintained, then no inequality can be possible in so far as premature exhaustion of the batteries is concerned, since premature exhaustion is caused and brought about just through such an agency as this. It is this very factor that is responsible for so much depreciation of the generative series since when the coil loses its resistive powers, and the entire product of the batteries is allowed to stream into and pass unrestrained through its windings, then, because they are working at a high tension—due to this inequality—and a maximum limit, the life of the batteries is rapidly shortened and their integrity utterly ruined.

Why is it that the induction coil undergoes this assured disintegration? To this question I shall venture no positive reply, for the phenomena is identified with numerous inexplicable things, all of which enter into and form an extremely complex subject. But that a coil is subject to such depreciation has been proven beyond a doubt, and no motorist who has had only a limited experience along this line will question it for a moment.

It is necessarily, then, a matter of considerable importance that much care should be exercised in the selection of the induction coil. It must embrace within its composition only such material as has an acknowledged standard of excellence, and the assembling thereof should be another matter not to be lightly passed by. The marvelous growth of the automobile industry and the enormous demand for motors and all accessories appertaining thereto have induced rapid manufacture, and in many instances the product which might otherwise have proven itself meritorious has been utterly ruined by nothing more or less than careless assembling.

Coil depreciation is shown directly in the motor's working qualities. The vehicle may be taken out and given a run of twenty miles. The first half of this is perhaps covered with no inconvenience, but later on the engine begins to operate badly and then it is but a question of time before there is a total cessation of its motion. The initial half of the run was traversed without embarrassment because during the period of disuse the series had been given sufficient time to recuperate, but upon the subsequent period of activity the coil allows the entire product of the batteries' generation to pass through its winding, which in turn calls for their maximum effort; this weakens them with the result that the machine is soon badly embarrassed.

To my knowledge in more than one instance well-known vehicles have been allowed to leave the factory with an induction coil in such a deteriorated condition that anyone should have noticed it. At any rate, there was nothing but one continual exhaustion to the series manifested by an unsatisfactory working motor and frequent roadside delays. In one case the purchaser of a carriage recharged the entire series on an average of about once in every four weeks, notwithstanding that during this time perhaps the vehicle would not have been run over a few hundred miles. For the first week after the batteries had been recharged things ran fairly well, but at the beginning of the second week the old inequality, which began with a jerky engine, put in an appearance with diminished speed and now and then a total stop as the very natural results.

As days went by these conditions became more and more aggravated until finally motoring was rendered a painful pastime. When the machine finally refused to run at all he would recharge the series of eight and this sufficed to once more help matters along for a time. But this chauffeur was inexperienced and so he thought all this sort of thing was included in the general makeup of automobiling, but while tolerant at first he finally grew disgusted and

threatened to abandon the sport. He was advised as a last resort to change his induction coil, which he did, feeling certain, however, that in so doing there was little likelihood of any improvement resulting. But even so, he followed the advice and the result of the change in coils was instantaneous and marvelous as well.

The batteries which before had been worthless after a few hundred miles had been run, with the new coil developed energy sufficient to last for two or three thousand miles. The explanation of this is all simple enough. Under the proper resistive measures, the batteries were called upon to furnish but a small ratio of the power they were capable of supplying, and so the owner, instead of contending with a continuous premature exhaustion, was by means of a proper coil permitted to enjoy all the joys of motoring without the annoying experience of being stalled every few miles.

You can do worse things than pay strict attention to the existing condition of your induction coil if you wish to make the use of an automobile the pleasurable thing which it should be.

A Line of Thought

He was an auto noter,
With a bargain-priced motor,
Who in trouble twenty miles from home was caught;
He made no vocal sign,
But this Mergenthaler line—
Bbbmj xhdsktm wnxdmMwb!! z6sDMujvx—
Expresses very simply what he thought.

Present Status of Touring Information

ADMITTING at the outset that no complete or comprehensive system of information suited to the use of automobile tourists is yet anywhere available, we not only respect the truth of the matter, but are enabled to read between the lines of that which is being widely offered as such. The call for this sort of service grew from practically nothing to a wide range of inquiry, as it were, in a night; and nowhere had any adequate preparation been made for it. Outlining and mapping good through routes waited, as is usual in such cases, upon the demand asserting itself and meeting the considerable expense of the work. Thus it was that when the inquiries began to come in to the representative papers devoted to the sport and trade, they met, not that prompt and accurate response which only years of careful observation and record could make possible and creditable; but either evasion or the worst kind of guesswork "information."

Up to the opening of the 1902 season, a call for an automobile route addressed to any one of these publications was answered, if at all, by reference either to the geological survey charts or to the old cycle routes and maps. The latter usually—a ready means when it is remembered that what there was left of cycle journalism clothed itself in automobile forms and became a numerical majority in the new dispensation. The old libraries and reference works were handed down as a matter of course, for no later substitutes were to be had; and out-of-date works remained better than nothing, so many thought.

This led to some curious revelations, as, for instance, where one "authority" scheduled a party of gentlemen operating the heaviest cars from New York to Long Branch by way of Staten Island and the railroad trestle over the Raritan river from Perth Amboy to South Amboy, N. J. Cyclists would always take train over this otherwise impassable barrier—soon, however, to be spanned by a fine new road bridge; but a motor vehicle must still go 24 miles to get across. In the hit-and-miss of the same "system," a hand ferry is (apparently) no more of an obstacle than a railroad trestle, and its directions read accordingly. To the degree that this sort of misinformation has been taken at its own valuation by the unsuspecting has the whole scheme suffered in public estimation. But as the service is advanced along rational and proper lines, it will find a large and sure place in automobilism, contributing very materially to the touring end; and the false prophets will seek other fields.

The interest in the outdoor sport due to the increased output

of road models, and the impetus given to the whole movement by the shows of last winter, multiplied the former demand for touring routes. Trips were likewise made in various sections and the notes of the same contributed to the automobile and other papers. These notes, with careful references, helped to fill the gap, but a central plan and continuity of purpose were lacking.

Beginning with its May number, the AUTOMOBILE MAGAZINE published the first of a series of road descriptions and illustrations, carried to and through October without a break. These tours have been severally and collectively the result of careful personal investigation of every road mile concerned in the work. They were the first in this country to be put out on such lines, and likewise the beginning of a plan to take up each well-defined and important section with the idea of tracing its principal through routes in the same way. That work is necessarily over for this season, with the following list of routes available through purchase of the copies containing same at the regular price of 25 cents each, and the wise man buys them now before they are gone:

New York-Albany.....May.
New York-New Haven.....June.
New Haven-Springfield-Boston.....July.
Boston-Providence-New Haven.....August.
Chicago-Milwaukee .....September.
New York-Philadelphia.....October.

It will be possible at the beginning of next season to start again, not at the initial point, but where this year's work leaves off. Other tours are already prepared, notably (1) the Connecticut River Valley line from New York to Brattleboro, Vt., and (2) from Albany and Troy to and across the Green Mountains; and these would have been published before now except that the relatively more important ones were given the right of way. Meanwhile our correspondence and information department, both separately and in co-operation with our outdoor service, by prosecuting its work far beyond the possibilities of early publication, has been enabled to answer inquiries in a still larger territory.

This work is, however, one of years rather than of months; and the problem the automobile tourist meets in other sections is how to make his particular trip in advance of its investigation by competent authority. He must simply go ahead and find out for himself; and if he will communicate the general results of his observations to us, it will be used in the interim for the information of others. One

thing we have no use for at all, and that is made-over bicycle material; it is usually worse than useless.

As for published road maps, about which many inquiries have been received during the season, there is no general and reliable series anywhere to be had. Those offered by Geo. H. Walker & Co., Harcourt street, Boston, Mass., are quite serviceable for Boston and its suburban riding district; also for eastern New England. Rand, McNally & Company, Chicago, publish the best road maps of the middle West. Most of the other publications in this line are guesswork, with the U. S. geological surveys as the sole working foundation. The principal trouble with these is that a person making a special through trip must seek his way from out a mass of maps for which he has no use. Nevertheless, the maps are valuable as giving one the general layout and topography of the country. The automobilist who desires to get a fair list of such maps as are to be had at the present time, with a careful selection from the entire field of them, might find it worth while to send for the catalogue of pocket road maps recently issued by Brentano's, Union Square, New York. Use the maps as a general introduction to your subject and work out the details in your own way, always allowing a generous margin not only for original error, but also for changes since their publication.

Too Much for Earthly Ability

HE was a portly person whose appearance and speech plainly showed him to be one of those individuals who think the world was made for them and the inhabitants thereof intended solely to wait upon them. Adjusting his gold eye-glasses with due deliberation he beamed through them at the salesman and said:

"I want an automobile which will not require any study on my part to know how to run and care for it, one which any person can run just the same as they drive a carriage. I shall not pay more than $300 for the vehicle, and it must be one which will not get out of order or be in the repair shop when I want to use it. Have you anything of the kind you could show me?"

"No, sir," said the salesman. "I believe you can get just the kind of vehicle you want only in one place."

"Where is that, sir?"

"Heaven."

The President of the A. C. A.

THERE are those intensely argumentative ones who question the wisdom of leaving well enough alone by asserting that to do so is to apply the brake of satisfaction to the wheel of progress.

Granting that it may not always be advisable to be content with well enough, even the most carping critic cannot gainsay the advisability of leaving very well very much alone.

The Automobile Club of America is not without those who believe that nothing is so good that better cannot be found; in fact, the club would not be worthy of the name "of America" were this feeling entirely absent; but change does not necessarily mean betterment, and it is a lack of appreciation of this which has caused some of those who, while meaning all for the best, are in their enthusiasm demanding that a new hand be placed in charge of the Automobile Club's executive force.

The gentleman whose picture appears herewith, Mr. Albert R. Shattuck, needs no introduction to the readers of THE AUTOMOBILE MAGAZINE. From the beginning of practical automobiling in this country Mr. Shattuck has been ever to the fore, giving generously of his time, his talents and his purse to the one end: that the sport might thrive and prosper.

That Mr. Shattuck's efforts in this direction have resulted in the placing of automobilism upon a firm and lasting foundation no one will question. That he has been assisted in doing this by his

friends and fellow clubmen is equally true, and no more convincing indorsement of Mr. Shattuck and his labors could be had than this very same assistance and co-operation on the part of those associated with him.

The danger of swapping mounts when crossing a stream has been clearly set forth by that foremost of Americans, Abraham Lincoln; that the danger of such changes is not lessened when the mount is a mechanical, not an equine, one needs no comment.

Mr. Shattuck has proven his worth; he has made of the Automobile Club of America an organization known the world over as one which accomplishes things; he has successfully combatted the efforts of the vote-chaser to drive the automobile from public highways; he has planned and carried out satisfactorily shows, tours, banquets, club nights, lectures, endurance and reliability runs, and in many other ways has proven himself to be the right man in the right place.

The Automobile Club of America is, therefore, to be congratulated upon Mr. Shattuck having been induced to reconsider his determination not to again accept its presidency. In re-electing Mr. Shattuck to the office he has so ably filled the club, while retaining at its head a man who has proven his loyalty to the best interests of the organization, will at the same time put a deserved quietus upon any introduction into its affairs of the entirely too prevalent Americanism of making a change for only a change's sake.

Automobiles as Insurance "Hazards"

By Dixie Hines

THE great consideration given to what is known as the "automobile hazard" by the accident insurance companies at present may be taken as evidence of the popular growth of the newest method of locomotion. For, when such companies compile statistics to establish an experience table for this novel hazard, it must be that the automobile has become an important factor in daily life.

The consideration of this "hazard," as it affects personal accident insurance, is a complex one. It will be understood very readily that every element of danger must be considered in estimating the probable loss, and each element must be regarded in its possibilities or actualities, or in both. Hence it is that the new becomes novel in its relation to existing things and affects a whole people accordingly as it comes into general use. It must be understood that the

companies are insuring not only the owners and users of machines against personal injury, but the users of the streets and roads of the country as well; and the task of fairly computing the cost of this added hazard is one that for the time keeps the actuaries constantly employed.

Personal accident records afford unlimited material for those who love to delve in statistics. The accident insurance companies, perhaps, have a more complete set of general statistics relating to their business than any other companies in the world. This is because, in addition to the regular sources from which they derive their information, they are ably aided and assisted by the States and the Federal Government and by the street railways and general railroad and transportation companies throughout the country. The Census Office reports, in its last statement, that the percentage of accidental deaths to ratio of population in the United States is rapidly increasing, offering, in substantiation, these figures.

During the twelve months preceding their last report, 57,513 accidental deaths were reported in the United States, the percentage of such deaths in 1,000 reported being 57.6. The corresponding proportion for the previous year was 53.7. The most alarming statistics, however, show the total number of accidents reported as over 11,000,000 each year, or 15,000 accidents annually to every 100,000 of population. The records kept by the accident insurance companies indicate that about 30,000 non-fatal accidents occur every day from ordinary causes.

It appears that nearly 6 per cent. of all the deaths in the United States are due to accidental injuries, but it is even more astonishing to learn that the probability that one will meet with some disabling injury within a year is far greater than the chance of his death from any other cause during the same period.

When it is said that nearly 6 per cent. of all the deaths are due to accidental injuries, it is to be borne in mind that this result is attained by contrasting the 1,039,094 deaths from all causes reported during the census year with the 57,513 deaths from accidental causes during the same period. But for the country, as a whole, mortality statistics are more or less incomplete.

The most reliable data that the census gives us are from the so-called registration States (Connecticut, Maine, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Rhode Island, Vermont and the District of Columbia). In this area during the census year 27,649 persons lost their lives from accidental injuries,

a death rate of 96 per 100,000 of population. In 1890 the death rate from accidents in the same area was 91.9 per 100,000. Here again—from a different point of view—is seen evidence of a steady increase in the proportion of deaths from accidents.

How complete these records are kept, as showing with what care the adjustment of the cost of insurance is to the changed condition in social and commercial surroundings, these very interesting facts are adduced:

Fatal accidents (and presumably non-fatal also) are more liable to occur in cities than in rural parts. The proportions of death from accidents and injuries were greatest in the Cordilleran regions, the Pacific Coast region and the Western plains; they are least in the North Atlantic Coast region, the Middle Atlantic Coast region and the Northeastern hills and plateaus. The warmer months show a larger proportion of fatal accidents than the cooler months, due, primarily, to increased activities in all kinds of games and sports.

An inspection of the census table showing the causes of death brings out the fact that a person is more liable to meet death by accidental injuries than by any other single cause. A person is twice as liable to die from accident as from old age. Typhoid fever, cancer, apoplexy, inflammation of the brain and meningitis, paralysis, diphtheria, diseases of the stomach, liver and brain, all are slight menaces to life compared with accidental injuries. The accident microbe is deadly, and is increasingly active. The 11,000,000 accidental injuries every year are enough to "smash up" every man, woman and child in Greater New York somewhat oftener than three times a year.

These general remarks are made that the foundation upon which rates are based may be understood, and as a basis, to which must be added—if it be decided to increase the rate in consequence of the "automobile hazard"—such additional premium as the companies may determine from a study of the changed situation due to the introduction of the automobile as a business and pleasure vehicle. It is readily admitted by all that it has materially increased the liability of every company assuming responsibility under an accident policy. As these policies, in their general terms, provide, in the most liberal manner, for weekly indemnity for a given sum, in multiples of $5, for a period ranging from 100 to 200 consecutive weeks for ordinary injuries, and an increased proportionate indemnity for loss of sight or limb or death, it will be seen that their

liability increases as the opportunities for accident or injury increases.

As a special provision, many of the companies, in seeking to increase the popularity of their policies, offer double and triple indemnity for death or injuries sustained while riding as a passenger in any form of public vehicle or elevator or while in a burning building. Some have added to this list of special features bicycle riding, tornadoes and cyclones, while one company, perhaps more for the effect it would have as an advertising feature than as an eventual source of profit, has included the "automobile hazard." These special conditions provide the double and triple benefits without additional cost.

The danger of the automobile is not so much to the driver and occupant as to the pedestrian or other road and street user. These persons, though not specifically, are legally included in the "automobile hazard," and it is this fact that makes the advent of the new conveyance of such importance to the actuaries of the companies, for they have yet to determine if this risk is to continue to be assumed without additional premium.

From a private report, tabulated from newspaper clippings representing the centers of operation throughout the United States, a six months record of automobile accidents is summarized as follows:

Fatal injuries sustained by occupants of automobiles..... 160
Fatal injuries sustained by others in consequence of automobiles 325
Non-fatal injuries suffered by occupants of automobiles..... 296
Non-fatal injuries sustained by others from automobiles..... 943

To put a commercial value upon these accidents, which is invariably the basis upon which "risks" are considered, would mean something like this:

Fatal injuries sustained, 485, which, assuming that each person was insured for the average amount of $5,000, would mean a cost to the insurance companies of $2,425,000; total number of persons injured in consequence of automobiles, 1,239, which estimating their injuries as such as would incapacitate them for four weeks each, for which the companies would be called upon to pay a weekly indemnity averaging $25, an additional sum of $123,900 would be charged, or a total for six months of $366,400, or for the year, $632,800, a sum that is not beyond possibility, though beyond probability, as this is assuming that every individual so injured was insured.

But it will thus be seen that should every person insure in an accident company, the automobile alone would have cost the insurance companies during one year over six hundred thousand dollars, and it is no wonder that the underwriters, looking upon the automobile with any but kindly eyes, support with alacrity every measure introduced by the clubs and conservative owners designed to properly safeguard the public and the owners themselves. Personal injuries are at all times painful to the injured one, and regrettable to the owner responsible for them, but that is not all, for unless the owner is protected by a liability policy, he may find his automobile more expensive to retain than was its cost in the first instance.

The accident insurance companies have, for many years, been noted for their liability. No situation arises that does not find them ready to meet it on liberal terms. So far they have accepted each additional increase of hazard without remonstrance. The bicycle as a means of pleasure and recreation added to their burden; so, too, football, baseball, polo, and each of the new sports marked by strenuousness and activity. Each has added its quota. The American is so constituted that he craves excitement and danger, and the new sport that does not carry with it an element of personal danger is immediately treated with indifference. Automobiling is perhaps the most serious of all the modern sports, only yachting and equestrianism standing in the same class. The tabulated reports of the companies show that nearly as much is paid on claims in consequence of sports and their allied interests as is paid on any other of the classes of claims most frequently arising.

While the companies can never legislate against the street user, who suffers most from automobile popularity, they can "prohibit" automobiles. This, however, is extremely unlikely, but all the more reason why the organizations having an interest in automobilism should combine and urge stringent regulations for the protection of the public. It is needed, and the interested parties should be the first to encourage such a proposal.

As Seen by An Official Observer

FIRST of all a well-merited tribtue to the season and the weather! October again proved itself the accepted month for the annual Endurance Contest, Reliability Run, or whatever other distinctive name the chief automobile road event of the year may hereafter be given. Then, if ever, the highways and byways are at their very best, affording good riding conditions, and other circumstances are most likely to be favorable. Cool, crisp mornings and evenings merge with sunny, comfortable forenoons and afternoons so gradually you are unconscious of the change until it is complete. From hillsides and treetops the full glory of autumn shows and reflects from the fields and waters. One not overtaken by storm or mishap must needs be in pleasant mood.

Perhaps the most fortunate of all in the organization of a run of this kind is the Official Observer—a guest of the promoting club, sharing no actual responsibility with the contestant, and yet with enough of duty to make him an integral part of the whole. He is expected to do nothing more than carefully observe and faithfully record both incidents and results. Though altogether overlooked or else briefly tabulated in the official summaries, what he sees and hears, on such an occasion as the 500 miles' out-and-home of the Automobile Club of America to Boston and return, may have the interest and value of a separate and impartial viewpoint from start to finish of the run.

Apart from the vehicles participating in the event or attending it in some official capacity, a number of automobiles were joined to the procession of the regulars at various points en route. These were, of course, a law unto themselves throughout, though not always recognized as independents by onlookers. They would usually appear unheralded at some control, continue on for few or many miles as the case might be, and drop out as suddenly as they came.

The originally good turnout was thus added to at unexpected

times and places, and the extra machines in line, when they did not interfere with the progress of the run itself, brought a new and interesting element to it. Most of them belonged in cities and towns along the route, and when their owners came out to meet the competing column, it was usually for the purpose of rendering a courteous escort in-town and out again onto the next link in the journey. To watch the result was to gain a new conception of the spontaneous good fellowship which marks the predominant automobilism of to-day. The same spirit that was shown informally where no stops were allowed made possible the larger "special" occasions which went with the run. Among the latter were the complimentary luncheons at Hartford going and returning, the theater party and smoker at Springfield and the reception by the Boston Automobile Club at their fine new clubhouse on Boylston street on Saturday evening.

Local color as well as a touch of the picturesque was contributed by the same independent squadron. Nearly all who joined the run in this manner appeared in bright and clean machines, just from the garage, in striking contrast to the dust-covered and well-laden vehicles participating in the responsibilities of the day. The costumes of the operators were in equal contrast, and the ladies who were with some of the visiting parties were made welcome and as much at home as time and circumstances would permit. But at no time was pleasure allowed to interfere with the duty of the hour.

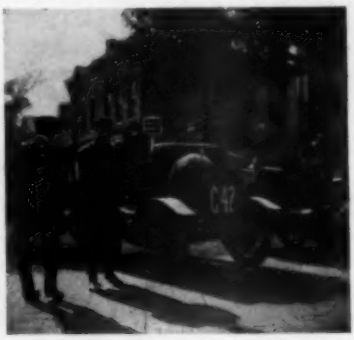
The final advantage of the independent column was the opportunity thus afforded to show up alongside some non-competing types. Most persistent among all the followers of the regular brigade was Mr. W. C. Russell, Chairman of the Runs Committee of the Hartford Automobile Club, who, with his daughter and Miss Corbin, of New Haven, were in and about the procession from New Haven to Boston and back to Hartford. Their Stanley Surrey was sent over the roads and bridges like a wasp, showing not only speed but also the ability to safely pass other vehicles with the narrowest margins of time and space. John Jacob Astor's Mercedes attracted some attention on the way to Norwalk the first forenoon, but it necessarily divided the honors with a great many extra vehicles. Mr. and Mrs. C. R. Mabley, of New York, caught up with the run at New Haven with a new American built C. G. V., which naturally interested the men who follow the new models professionally more than the people who simply looked on. Another non-competing machine in line for a time was the Ball Steam Car-

riage, in which Mr. Charles E. Ball and party met the returning crowd at Norwalk Wednesday afternoon, and came in at a fine, even pace just after the second brigade. A few other makes had likewise a partial showing, adding to the completeness of the event as a road exhibition of automobiles, beyond that which the official summaries will give.

LOOKING HIS BAGGAGE OVER

The temptation to try out speed was present from start to finish, and the maximum 14-miles average must have been a sore trial to some of the more ambitious chauffeurs. But the way the stated even pace was kept reflected credit upon contestants and observers alike. If there were any violations of the letter or spirit of the "Reliability Run" they were not to be noticed in our six days in the line; nor would it be easy to credit any charge of collusion between operators and the representatives which the club had placed in each vehicle. Undue advantages were plainly impossible to be had; and the only point in the rules which elicited even a difference of opinion was as to the propriety of charging a machine with an accident or delay wholly due to some outward circumstance. It is doubtful if this matter has yet received the attention its importance deserves.

A CREDIT TO HIS TAILOR



PLEASED WITH THE PROSPECT

If any fault were to be found with the observers, it might truthfully be said that some of

them were none too familiar with automobiles and the methods of figuring their times in an event of this kind. Some minor mistakes in the official records would trace to this source. But it is no easy matter to secure a quota of 75 men, in addition to the officials, starters, timers, checkers and the like. The contestants are usually the owners themselves, or else men taken from the trained staff of the makers or their representatives, with considerable numbers to draw upon in each case. But the promoting club had to go out into the open for its hundred or more men in all, and find that number who could and would serve.

The first sign of a "green" observer was his appearance at first of being ill at ease in the vehicle of which he was technically in charge for the club. Sometimes this would lead to advice and cautions to an expert operator; but all this passed away as the new formed acquaintance—and self-confidence—grew. The time and trouble taken to figure out arrivals, departures, stops and the like were noticeable, with more than one instance of being none-too-sure until another had been called on for his opinion.

This brings to mind one of the many sidelights of quiet humor which will come into an event of this kind. There was a bit of "loafing" in order to save arrival ahead of time at the New Haven control the first night. It was according to the instructions of the official observer, and he was right. Onlookers, unable to understand how anything else than near loss of power would lead to a snail's pace at the end of the day's run, began to make sport of the vehicle and its occupants. It bothered no one but the official observer himself, who evidently had little use for good-natured raillery. His only means of escape was to discover that he had figured more time than was necessary to gain control at the right time. But he was unable to alter the former result and settled back, as much as to say that the crowd might do its worst for all he cared. But he had already given himself away, and I dare say that no one enjoyed his honest discomfiture more than the experienced operator at his side.

As a matter of fact, the public refused absolutely to be convinced that the run wasn't a race, and they would cheer for any vehicle that would pass a bunch, no matter under what conditions. Even the independent followers received at times more attention than the contestants themselves, all depending upon the degree of speed shown at the moment. The factor of reliability was of little or no importance except to those definitely interested; and in this

one respect at least the run will fall short of its just deserts in popular favor. One fellow who watched the crowd as it came into the noon control at Hartford inquired how long since leaving New York; and when informed a day and a half went away disgusted with the apparent mediocrity of the whole affair. Verily we must have our own points of view!

CHECKING AND RECORDING

The newspaper men followed the run by train and automobile, as did also the representatives of the sport and trade press, both as official observers and passengers, numbering twenty-five or more. It reminded one of the old bicycle tournament days at Springfield and Peoria, or the L. A. W. national meets at Denver and Asbury Park. Among the New York daily "specials" who were with the party from beginning to end were A. G. Batchelder of the Journal, Alfred Reeves of the Mail and Express and John C. Wetmore of the Herald, all of whom are responsible for creditable automobile departments; with J. C. Kerrison, whose work is equally well known to readers of the Boston Herald. The result was that some very good dispatches found their way into these publications, in decided contrast to the garbled reports that appeared in other papers. As a rule the newspapers in the cities along the route copied verbatim

DUSTING UP A BIT

FIRST AID FOR THE INJURED

the last dispatch to some New York or Boston daily, with a few notes of arrivals and departures to give a local color to it. Only the Springfield papers had original reports even of local features.

Through some oversight or error, the police were nowhere to be seen a half hour before the leaders were due at Hartford on the second day out. A member of the A. C. A., who had come from New Haven by train, noticed the fact and telephoned direct to headquarters from the Allyn House control. It was just before noon, and the detachment sent down was in anything but good humor. The sergeant in charge went through the waiting crowd like a "wild" motor and ordered onlookers, newspaper men and even the officials to the sidewalks. It fell to the irrepressible Wetmore to raise the voice of the privileged ones against the summary treatment, and for the moment their colloquy was worth listening to. But the officer, of course, held the trump card, and the Herald man was roughly told that a bit more and he would be put where the rest of the run wouldn't bother him. The crowd was against the sergeant to a man and showed it, too, insomuch that the officer moved out of sight and peace was restored.

It is frequently said that you will sooner or later meet all of your friends on Broadway; so might it also be believed that an occasion of this kind will bring more of your automobile friends and acquaintances than could be rounded up on any other one pretext. And not only these, but others you know only by reputation or correspondence, or even through some circumstance of slight moment, come into the same orbit in the annual road week of automobilism. It strengthens the social foundations of the sport, while establishing a confidence in and among the trade which counts for much in good fellowship and progress. Trade talk is always permissible and the event has all of the advantages without any of the formalities of a convention.

It happened that two of the three noon controls were in cities noted far and wide for their enterprise and achievements in practical mechanics. At Hartford and especially at Worcester, skilled workmen from nearby factories were among the most interested of spectators, the noon hour giving them an excellent opportunity to view the different vehicles and ask questions concerning them. It was a striking illustration of how the automobile and its possibilities appeal to the man of constructive turn of mind, whether as a hobby, a business or a trade.

The same class was doubtless as well represented in the crowds at other places, but they were more conspicuous at Hartford and Worcester because they had come in their factory and foundry garb, and so were readily recognized. No doubt some of these men do now and others will in time come to devote themselves to the automobile; and they will bring a quality of thought as well as of handiwork to the great value of the industry. Repairers located in the cities and towns along the route were also in evidence; and there were several around the control at Boston all the time it was open. It is only as these sub-surface interests develop that the Reliability Run assumes its real proportions, and its widespread benefits appear. OFFICIAL OBSERVER.

Autumn

Now gently falls the fading light,
The autumn's sunset veil,
While dusky grows the wavering flight
Of whippoorwill and quail.

The grain is bound, the nuts are brown
On every wooded hill;
The light is softened on the down
And silvered on the rill.

The reddened leaves with withered wings,
Swept lightly to the sod,
And autumn walks the land and sings,
With rustling sandals shod.

True to His Trade and Training

HE drew his superb form up to his fullest height, and while the fire of anger glowed in his eyes he swore an oath.

"Listen!" he cried. "I tell you it must be done to-night!"

"It must!" cried Edgar Montmorency de Jones. "To-night or it is too late!"

"It cannot be!" protested the other. "It is beyonw my power."

"But did you not promise?" hissed de Jones fiercely. "Did I not have your word? Tell me that, you wretched fellow!"

"Yes, alas! I promised. But I was wrong. I should not have done it. I——"

"Enough!" cried de Jones. "It must be done to-night! At six!"

He strode from the place in anger.

"Well," said the repairman as he slowly lighted his pipe, "it is easy to say it must be done, but if he gets that runabout of his'n out of this place in a week I'll miss my guess."

WHERE ROADS AND LANDLORDS EXCEL

And then he sat himself down with the daily paper to read about the price of anthracite coal.

Advantages of Modernity

Mrs. Scorchmore—I thank goodness for one thing, at any rate.

Mr. Scorchmore—What's that?

Mrs. Scorchmore—Even if I fail to do as well as I might, you can't say I don't run an automobile as well as your mother used to.

Fast and Furious

"And you say the perspiration ran down your face?"

"Ran down? It scorched."

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Relating to a Birthday

WITH this issue the AUTOMOBILE MAGAZINE begins the fourth year of its existence. As most things go four years is not a great length of time, but so recent is the coming of the motor vehicle that those who have been connected with it for even so short a time as four years are entitled to call themselves veterans.

When the first copy of the AUTOMOBILE MAGAZINE appeared there was but one other automobile publication in America; to-day there are a score, with promises of even that number being increased.

With the congratulations and well wishes from friends it made when automobiling was an infant, and who remain its friends to-day, when the infant has become a young giant who is the wonder of the worlds of sport and commerce, the AUTOMOBILE MAGAZINE starts on the fourth year of its existence.

To its old friends and to its new ones the AUTOMOBILE MAGAZINE pledges itself to continue in the future to serve them as loyally as it has always done in the past, asking only in return that its friends of the past will continue to aid it in its efforts to make the magazine a representative publication of and for the best interests of automobiling.

Retrospect of the Reliability Run

WERE the 500-miles' round trip between New York and Boston, reported in detail and illustrated by many photographs in this number of THE AUTOMOBILE MAGAZINE, a new and novel departure, instead of a single road event in the steady progress of automobilism in the United States, its special lessons and permanent results would unfold with more distinctness than they do at this time.

Nevertheless, the showing, both of the vehicles collectively and their individual performances, is eminently creditable to the sport and trade; while the promoting club and its official staff deserve the thanks of all concerned for their thoroughgoing, courteous and efficient management from first to last.

The other factor well-nigh indispensable to a pleasant road week—the weather—was nearly all that could have been desired; so it was up to the machines and their operators to find out just what could be accomplished under certain uniform conditions. No such opportunity had come to any previous "Endurance" or "Nonstop" contest; and the official summaries of the event were known to be scarcely less than a report to the American people on the everyday capabilities of automobiles.

The closer examined, the more arduous and impartial the ways and means of bringing out the factor of Reliability appear. Practically there was no unpenalized leeway to a contesting machine, since the ten minutes' margin either way at each "control" had to cover both arrival and registry; and it required good guesswork as well as operating skill and a fair running average to insure a safe clearance.

To the rules, accident and mismanagement were one and the same thing in their effect upon the final record of the vehicle. Such as won out a perfect score on these lines may count themselves fortunate as well as thoroughly tested in road work; and in cases where the only defect traces to some unexpected and inci-

dental circumstance, the same credit will attach in the minds of those who know and weigh the facts.

Other contesting machines may suffer temporarily in the estimation of those who take their information mainly from the summaries, without regard to circumstances; but the substance and conclusion of it all is a valuable gain to the popularity and strength of the movement throughout the country.

Steady increase in the operating efficiency of the standard types of automobiles is written all over the Reliability Run of 1902. That sixty-eight of the eighty entries and seventy-five starters should have finished the 500-miles' trip before the home control was closed at 10 P. M. on Wednesday night is sufficient proof not only that the day of the practical self-propelled vehicle has fully come, but that the radius of its use has been notably lengthened within a twelvemonth.

Those people who have been waiting for more radical improvements are notified by the findings of this event that further delay in purchasing their first machine means time and pleasure lost out of all proportion to the probable advantages of further waiting.

That this fact will be driven home between now and spring to those who are "almost persuaded" to buy is certain, and in this result alone, if there could be none other, the time and money spent by the trade to make the run a representative one will return many-fold. A view in this direction does not detract in any way from the sound sportsmanship of the participants; it simply opens up the way to larger and better things for the future. We are coming close to the best European standards.

The facility with which repairs can be effected on the road was also exemplified, but curiously enough when you come to think of it, by instances which must necessarily keep the machines demonstrating the fact from the formal honors of the trip.

One heavy gasolene car which had behaved splendidly from first to last with this exception, broke an axle cup-bearing a few miles this side of Bridgeport, on the return journey. The attempt to fix it upon the spot proving unsuccessful, a telephone message was sent to Norwalk, and a duplicate part brought to the place by special messenger in less than 70 minutes. By letting luncheon go at Norwalk, and simply stopping for registry at the control, this car was repaired and driven into New York at the required average speed of 14 miles per hour, finishing not far behind the leaders.

Had he been permitted to make up the lost time by speeding after the repair had been completed, this contestant might easily have gone in with the luckier bunch. The delay was, of course, charged to him, and the machine suffers accordingly in the summaries; and there were other instances of like nature, though not under our own observation.

These considerations suggest a possible new sub-division of honor for the next event of this kind, where a quick and permanent repair made on the road may be allowed, under specially understood conditions, to recompense for an accident pure and simple. There is no more important factor in all-around efficiency than this, and the confidence of the owner in this direction may often determine what he thinks wise to attempt in the way of road work, particularly tours.

The representation of competing makes was technically international, though so largely and so distinctively American that it will be remembered especially as an exhibit of our home industry. It seems to be much farther along than bicycle building was at the same relative stage, despite the larger problems to be solved; and with its potential possibilities no other agency of recreation and utility can now or is likely to compare. Eastern makers were, of course, in the majority, New York and New England leading, but with the Western men and machines conspicuous both in the procession and on the list of those having perfect records.

Anticipating a wide and general inquiry from the public at large as to the effect of this particular run upon design, weight, propelling powers and the like, it may safely be said that automobile construction has advanced too far beyond the experimental stage to be deeply marked in its course by any single event on the sport's side. The showings of the different vehicles here as elsewhere will be studied by the makers for guiding lines; and the results will be read in the added refinement and increased efficiency of coming models.

A numerical majority of entrants were naturally gasolene vehicles; but the work of several steam machines was unsurpassed. It was not an occasion to try out the road possibilities of present electric types, and the only one to start dropped out of sight somewhere along the way. All weights figure side by side in the first class certificate list, showing that this problem is more a matter of power ratio and proportion than of practicability or otherwise.

The American people will find abundant use for all present types and weights, with more certain to be added as the result of longer experience; and the designer and builder will be found equal to the task of their production. The issue of this run was put squarely upon the factor of "Reliability," applied to all indiscriminately; and the emphasis was very properly kept there throughout the trial.

Where Nature Beckons

HE who, owning a motor vehicle, is content to pilot it always and ever through crowded traffic on street and boulevard, is to be pitied. Why does he not take himself and his carriage away from the city and out into the country? What if the roads are not so smooth, nor the possibilities of display so great? To pay for their absence the very air is invigorant; fragrant from the harvest, spiced with wood smoke, bracing from the first frosts, scintillant with the glorious sunshine that fills the shortening autumn days with splendor and makes thin and luminous the attendant shadow.

"Bob White," shrills of "more wet, more wet;" his Quakerish little wife, with half-grown brood, trimly speeds across the roadway, into the ripened corn, or with musical "whir-r-r-r," rises to dive into the distant sea of undulating brown.

Meadow larks trill and carol on the rusty wire, or perched on the infrequent posts that hold the cattle from the ripened field. Hawks fly low; frightened sparrows flutter into trees and hedgerow; rabbits scurry from bare pastures to grassy covert, or sit erect and watch with distended eye, quivering nostril and rigid ear, the impending danger they dread from the chug, chug of the motor, which impels you on your way. Murmur of voices, the morning cock crow, the lowing of cattle, are as distant music carried softly to the ear by the voluptous air.

Corn shocks dot the roadside fields—tents of an army that stands nearby in whispering ranks; a multitude of peace and plenty; no arms, no equipment, but a haversack of golden grain on hip and shoulder. Save a weary few, they stand expectant, awaiting to deliver their garnered wealth, be mustered out, and with empty pockets, light hearts and fluttering banners retrace their steps via a mouldering way to the place whence they came and rest.

In rusty velvet fields, big dusky haystacks stand in herds or gather in about the barn, shouldering one another in ponderous good humor. From the inspiration of the caressing air, the peaceful, plenteous view, satisfied achievement of a summer's work, of goodly store from nature's plenty, the automobilist who seeks pleasure in country rides, may look with brightened eye, bounding blood and defiant head to the north, undaunted by the icy breath that tells of coming snow.

The Man and the Motor

IT is almost universally declared that a horse invariably knows when the person who holds the reins over him is afraid, and the conviction is rapidly growing that some such theory will be required to explain the apparent combative instinct of the motor vehicle.

Novices in the management and control of an automobile are naturally reticent about many of their experiences, but enough of them have been made public, however, to invest the mechanical carriage with an awe-inspiring personality never before accorded to an inanimate object. The tendency of an automobile to go out of its way to indulge in unexpected and undesirable performances is a mere aimless flippancy that has ceased to cause any surprise to the nervous novice.

The utter absence of such performances in the same conveyance when it is controlled by an experienced individual is so very marked as to make it at once evident that the alleged depravity is entirely one of man, not machinery. As in the case of the horse, the motor at once detects the man who is ignorantly afraid of it, and promptly proceeds to have fun with him.

What Machinery Is

THE general theory of mechanisms which the spread of automobiling is daily making of vital import to a large number of people whose previous training and experiences have not qualified them for understanding, is not nearly so complex as the majority of the newcomers think it to be.

Defined as near as may be in a few words every machine, whether automobile or otherwise, consists of a number of material bodies, resistances, joined together reciprocally, upon which natural

forces act to produce a desired effect, and the effect may be either a state of rest or one of motion.

The resisting bodies and their connections are the mechanism. Its effect is not known until we define the acting forces. The same machine will produce different effects according as different forces play upon it.

Machines are subject to three effects: static, when the forces produce equilibrium; kinetic, when the result is motion; and, finally, dissociative, when the connections of the machine are changed. The latter effect is usually not considered, but it is essential to take it into account.

No machine could be built, in the first place, unless it was capable of dissociation. In some machines—locks, for instance—the parts are dissociated every time the apparatus operates. It is desirable to design most machines, however, so the dissociative effects do not come into play during their operation.

It is along the line of thorough understanding of the few basic hints above given that the right kind of knowledge of an automobile can be most quickly arrived at. There are no "short cuts" to a proper understanding of any machine, and it is because so many owners of automobiles have been convinced to the contrary that their matriculation and graduating from the college of experience has been so expensive to them and disastrous to automobiling.

We would commend to the promoters of American automobile tests or runs the very excellent idea of our British cousins, by which the securing of good and impartial observers is made a certainty. As an essential to the acceptance of the entry and after that of a chance to compete, each vehicle entering British tests must supply an obserevr satisfactory to the committee in charge. When the observers are allotted, however, the committee does not allow the observer to act officially for or with his nominator. The result of all this is that a sufficient number of expert observers is sure to be on hand, and as in every case the observer is assigned to the vehicle of a stranger, he can best serve the interests of his nominator by seeing to it that the vehicle he is in most strictly obeys the rules of the contest. There is room for considerable improvement in the American system of appointing observers, too often like kissing the allotment of these important officials is made by favor, a thing which, however correct it may be in kissing, is not at all so in contesting.

One of the strongest testimonials for the automobile which we have yet heard of comes from Mr. H. C. Frick, the well-known steel magnate of Pittsburg. Mr. Frick is reported to have said recently that the difference between his old method of driving to and from business each day and his present method of going in a motor vehicle is worth at least half a million dollars to him annually through the saving in time. It appears that Mr. Frick lives fourteen miles from his office, and that he invariably covers that distance night and morning in an automobile, the time required one way being exactly twenty-two minutes, a slight strain upon the legal speed restrictions, perhaps, but still not quite enough to condemn the practice—unless Mr. Frick is caught and convicted. This we hope he will never be.

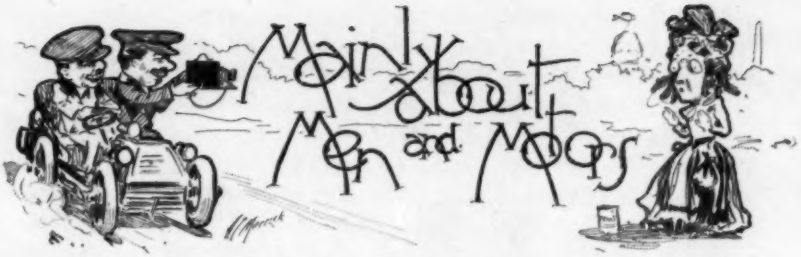
With a gradient in portions of the course as high as one foot in twelve, M. Cauchord recently won a contest up Mt. Veuloux, the steepest hill road in all France, in 27 minutes, 17 seconds. Such performances as these are but little short of marvelous and once for all remove the motor vehicle from the realm of the experimental; any method of conveyance which climbs a mountain at a rate of speed close to two minutes for each one of a dozen miles comes very near being a demonstrated success.

Automobile owners are not the only people who are persecuted on account of horses being nervous. A Spokane, Wash., paper says: "A petition is in circulation in the resident sections of the city asking the city council to pass an ordinance preventing locomotives from blowing whistles within the city limits. The petition states that the railroads pass through the business and resident portions of the city and the blowing of whistles is dangerous in that it is likely to cause runaways."

It is well enough, of course, to call a spade a spade, but there are times in criticising a motor vehicle when the calling should be done in a whisper.

Time may be money, but somehow the manufacturer always appreciates the money the automobilist spends with them more than the time.

The more a pneumatic is blown up the bigger it gets, but the more a married man is blown up the smaller he feels.

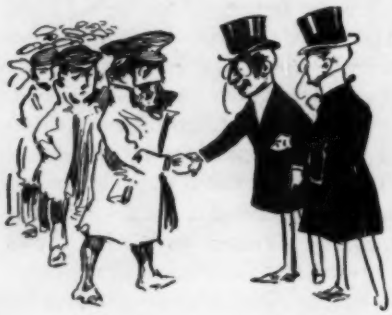


THE 1902 endurance or reliability test is over and a few words from one who went through the 1901 test, New York to Buffalo, and the New York and Boston picnic run, may be of some use. It is a question in my mind if any real comparison can be made or drawn between the two tests. The roads and the weather were entirely dissimilar, as any who took part in both tests will readily testify. The New York to Buffalo affair was undoubtedly the most severe public test that any automobile will ever be put to in six consecutive days. Despite that, however, over 50 per cent. of the vehicles starting finished, a thing most creditable to the American automobile manufacturer.

That any of the competitors in the recent New York and Boston test should fall by the wayside was also a cause for surprise, as it is doubtful if more perfect roads or weather could have been chosen for a test of the practical and reliable construction of automobiles. It was at once apparent that great improvement had been made in the twelve months which had elapsed since the Buffalo endeavors. But even so the test was quite ample enough to point out to several manufacturers where they could make improvements in construction and they were fortunate indeed that the elements and the roads gave such a perfect combination for favorable results Taken all in all, however, the test was a splendid advertisement for the American automobile, since it conclusively proved to the public that the American automobile has reached a stage in its development which no longer leaves room for doubt as to the advisability of at once joining the automobile procession. The roads were practically perfect, with the exception

of those between Springfield and Worcester, and some roughness between Hartford and Springfield. The authorities of Connecticut and Massachusetts can justly feel proud of the splendid progress their states have made and are making in modern road building.

As compared to the 1901 test the 1902 one was a social and gala occasion, since the participants had plenty of opportunity to get acquainted. The liberal time allowed and several short runs between controls made it rather irksome for some of the competitors who had to do a lot of low-speed work in order to prevent disqualification at the hands of the officials. Too much cannot be said for the entertainment provided by that model automobile club, The Massachusetts of Boston, which threw open its splendid establishment on Boylston street to the pilgrims. The resulting gathering reminded me of the old bicycle meet days, when every wheelman was glad to meet another and strong fraternity existed. The automobile bids fair to create another such desirable condition. One of the decorations in the Automobile Club of Massachusetts is a fancy automobile picture of good dimensions, handsomely framed, being the gift of this magazine to the club some two years ago, and to show their appreciation the Massachusetts gentlemen fastened to the frame a gold plafe mentioning the source of the gift.



At Hartford the tourists were taken the best of care by that clever firm, the Hartford Rubber Works. President Parker and his merry men saw to it that no automobilist went thirsty or hungry when passing through the capital of the Nutmeg State. The parlors of the Allyn House and the large dining room gave Mr. Burton Parker and his staff a splendid place for looking after the comfort of his firm's guests.

At Springfield the Knox Automobile Company provided an evening spread on the way to Boston and a large company took advanttage of the Knox Company's thoughtfulness. Inadvertently, I imagine, the Knox people made a mistake in not looking after the newspaper contingent, with the result that the New York and other press men enjoyed a little banquet of their own in the café

of the Cooley. The J. Stevens Arms and Tool Co., manufacturers of the now well-known Stevens-Duryea vehicle, profited by the mistake of the Knox people, with the result that the home papers of the press men gave splendid accounts of the entertainment. The Stevens blow-out consisted of a theater party, followed by a smoker. The affair was largely attended and was really the star entertainment of the trip, since everybody had spare time, since the next day called only for the short run between Springfield and New Haven, a matter of some 68 miles.

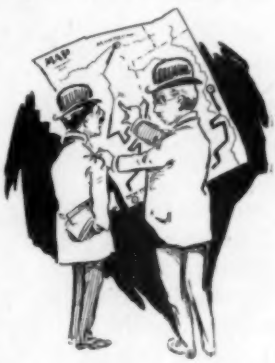
One of the pleasantest features of the run was the uniform courtesy displayed by the contestants. This was particularly noticeable when a disabled vehicle was passed. When this occurred the one passing would inquire: "Can we be of any service to you?" Speaking of this, I was much impressed by an incident which took place between Worcester and Boston. Some 20 miles out of the Bay state capital, Elwood Haynes ran alongside one of the Apperson Bros.' cars, which had become temporarily disabled, through losing a part of their circulating pump. Mr. Haynes saw that something was wrong, and although the Appersons were active competitors in Mr. Haynes' home town, the head of the Haynes-Apperson Co. called out to Edgar Apperson: "If I can be of any service, Edgar, I will stop." Knowing the relations formerly existing between the two and the present friendly rivalry, I turned to Mr. Haynes and said, "Mr. Haynes, you are certainly a good Samaritan and I admire the spirit which actuated you to offer your services to Mr. Apperson." To which comment Mr. Haynes replied: "It does not aid me in any way if anything should go wrong with any of my competitors. I want to see them all do well, since their doing so will be good advertisement for the automobile business." This proved to me that Elwood Haynes, of Kokomo, Ind., is the kind of man no business can have too many of. Some of the other contestants, however, in moments of enthusiasm and excitement temporarily forgot the courtesies of the road. Three or four of this kind passed the vehicle I was in on the wrong side when we were leaving Springfield on the last day of the trip out.

Another lesson gleaned from the run was the uniform welcome accorded the automobilists by the people all along the road. No Roman conquerors on their return to Rome ever received a more enthusiastic acclaim than did the New York and Boston endurance people, which went to show that in one year a great and a favoring change had taken place in public opinion, since there was a decidedly hostile feeling shown through New York state on the occasion of last year's contest. Of course, the superiority of New England intelligence and culture may account for this, but I lean to the opinion that this change has been caused mainly through the altered feeling toward automobilists and automobiles in the editorial offices of the big dailies. When editors of such papers as the *N. Y. Herald, Journal* and *Sun* become active automobilists themselves, then something happens.

The comedian of the trip was Percy Owen, the capable manager of the Winton's New York city branch. Mr. Owen grew in favor from the start and he was closely pushed for popularity honors by W. J. Stewart of the New Jersey Automobile Company. At the Springfield theater party a few of us dared Percy Owen to dance with the leading lady. The next moment he was dancing gracefully behind the footlights with the star, Henrietta Lee, to thunderous applause. Between Meriden and New Haven the Winton car, with Owen aboard, passed a farmer whose hippomobile was loaded with live chickens. Stewart was appointed a committee of one to negotiate for a crate of the cacklers, which he immediately proceeded to do. After completing satisfactory negotiations, which resulted in his becoming sole owner and proprietor of some fine male and female chickens, Stewart suddenly became aware of the fact that Owen and his car was a mile down the road. Stewart waited and placed the crate on the first automobile that came along, and by means of sprinting relays, he finally caught up to Owen, and the pair arrived in New Haven to the accompaniment of a rooster chorus. The big Winton car was promptly surrounded by Yale students, who were presented with the fowls and in turn the students extended urgent invitations to Messrs. Owen and Stewart to partake of roast, boiled and fricassee chicken in the dormitories that night. That the different suppers came off was very apparent on the campus when shortly afterward the breezes wafted the perfume of cooked chicken. W. J. Stewart posed for a photograph at Hartford with a friend who is shown elsewhere in this issue, while the head piece of Mr. Stewart's acquaintance looks very much like it

was made from a muffler. I really believe a tomato can was its father. The business of the wearer was advertising some sort of salve and he was delighted to meet the automobile gentlemen, but he did not bargain for a three-mile walk back, which came to him after scraping up an acquaintance with Stewart, who held him in the vehicle until he had gone three miles out of town, and then released him after telling his unwilling guest a ghost story that it was against the rules to stop or go slower than 15 miles an hour. The arm seen in the picture belongs to Percy Owen, as he was throwing it affectionately around the tomato can owner's neck.

It was the general opinion that the task was too easy, and as a result of this belief, Alfred Pierpont Reeves, of the *Mail and Express,* has already come away with a story advocating next year's run being scheduled from New York to Montreal, and 1904's from New York to St. Louis. "Al" Reeves, however, does not know as much about the roads between New York and Montreal, or he never would have proposed such a route. THE AUTOMOBILE MAGAZINE'S road expert, Robert Bruce, tells me that there is practically no road between New York and Montreal, and that the trail between Albany and Plattsburg, along Lake Champlain, would come pretty near losing an Indian. Of course, the road to St. Louis is a different matter, since a good route might be picked out.



Here is a suggestion for the next run, which I think is practical and which in my humble opinion would fill all requirements. Why not organize six separate runs from New York to some point and return? One day say Poughkeepsie and return, or even Albany. New York to Montauk, L. I., and return or even to Montauk and back in two days. Then to Bridgeport and return; employ another day in Jersey and still another in going around Staten Island. There's a plan which would give the metropolitan papers plenty to talk about.

I think the time has arrived when minor repairs and small breakages, such as come to chains, for example, should not count against the vehicle, only when a complete new part is utilized to make the repairs. One of the Haynes-Apperson machines driven

by Heber Michener, was forced into a ditch at Yalesville, Conn., in order to avoid running into a big machine which would not allow it too pass, and the result for the Haynes-Apperson vehicle was a broken spring hanger. Now this was no fault of the Kokomo machine and I was surprised to see that the committee penalized the Haynes-Apperson carriage for an accident over which the driver had no control.

One of the features of the run which means a good deal to the steam carriage interest was the splendid showing made by the steamers. Taking the two types of vehicle, gasolene and steam, and the number of breakdowns experienced by each, the steamers certainly showed up in great shape. All this goes to prove that the day of the steam vehicle is far from having had its day, and Prof. Sweet's judgment, as expressed to the writer some time ago, to the effect that the steam vehicle would yet become a most popular automobile, bids fair to be realized. The Prescott Automobile Co. only entered one vehicle and the work accomplished by the little red Prescotter was marvelous, in all of which the driver, Harry M. Wells, deserves no small credit for the complete and clean score he made. The White Sewing Machine Co., of course, was expected to score, as that is always expected of the White, and the Cleveland crowd acted and looked as if they were on a picnic run, so easy did they take matters. The Foster Automobile Company, of Rochester, qualified with the winners and qualified for the cup and repeated the good work this same steamer did last year over roads immeasurably worse. Grout Bros., of Orange, Mass., were distinctly in the run, and Charles B. Grout, in his red football jersey, took matters very easily.

One of the pretty incidents of the trip was the appearance, at various stages of the journey, of a gentleman and three ladies of his family in a Stanley steamer. The young ladies of the party made a decided hit owing to their deportment and beauty. The White steamers at the finish came in all together, as did the Haynes-Apperson trio of vehicles. Frank Nutt, the driver of the Haynes-Apperson phaeton, had a perfect score, and as a matter of fact so did Heber Michener of that company, with the exception

of the ditching experience I have noted. Mr. Haynes suffered disaster through the faults of a chain manufacturer. The Stevens-Duryea carried out a prediction I made in regard to that machine after I had seen it some time ago and its performance was the talk of the run. The Knox Automobile Co. also gained in popular favor and did the usual good work expected of the waterless automobile. The Thomas B. Jeffery Automobile Co. won a host of new friends, the Kenosha made carriage doing some surprisingly good work. Mr. Jeffery himself was on the run from start to finish and it must have reminded the pioneer manufacturer of the early days when the bicycle business was in its infancy. The two Rambler automobiles made by Mr. Jeffery, were superbly handled in the run by Arthur Gardner, the old bicycle champion, and Gaston Plaintiff, who is representing the Jeffery Company in a missionary way in New York.

The Fournier-Searchmont people certainly cannot complain as they had success measured out to them by the bushel. Three starters and three prize winners of the first order was the verdict of the committee on Searchmont's. J. S. Bunting, an old Princeton forward football man, put his particular Searchmont through as if he was bucking the line, and he won, too, just as he did in his college days. Mr. Bunting is the Philadelphia manager of the Wanamaker automobile department. L. J. Sackett, now with the N. Y. Wanamaker automobile establishment, drove a hard race with Bunting, while R. Green, another Searchmont man, did his duty. The party were assisted by Wayne Davis, the Wanamaker automobile school man of Philadelphia. Looking at the Searchmont in 1902 as compared to the Searchmont of 1901, it is at once evident that there is no comparison. Mr. Gallaher and his superintendent must have been doing some pretty tall thinking and work since October, 1901. William Deavor Gash, the clever sales manager of the Searchmont Company, was all smiles on Thursday, when he received a telegram telling him of the committee's report. By the way, he is now called "Mr. Deavor," because a gentleman of that name was "pinched" by a bicycle policeman recently at the

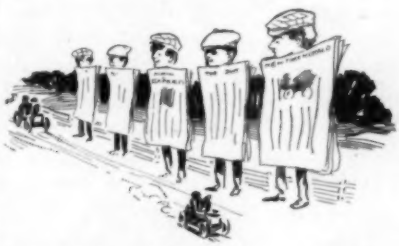
village at Radnor, near Philadelphia, for violation of speed laws, which are not so elastic as the Radnor treasury, which can always hold a little more automobile money. Mr. Gash, of course, denies that he is "Deavor," but two young society ladies of Philadelphia have gone on record with the statement that he looks like the man. Whoever the "Mr. Deavor" is, he is letting a wealthy banker fight the Radnor authorities, who was also asked to contribute to the Radnor treasury, but who, unlike "Mr. Deavor," who gave up $12.90, is holding on to his cash, while declaring he is willing to spend some of it in law to see if the Radnor bicycle policeman's watch is right.

The Packard made an excellent showing, and Messrs. Harlan W. Whipple and G. L. Wiess deserve their gold medals. Mr. Whipple's hubs did no damage, although they took up a good deal of the road at times. Mr. Whipple was one of the joyous sort on the run and drove with the precision of the engineer of a 20th century limited train, despite which he had time always to shout a cheering word as he passed or was occasionally passed himself. The Apperson Bros., with their two new cars, made a brave showing, and it was easily seen that their training in the Haynes-Apperson factory fitted them for personal endeavor of a high order.

The Autocar Co., of Ardmore, Pa., made a good impression with their three businesslike little touring cars, which were sent fresh from the factory over the roads to New York for the contest, and they came through without any trouble worth mentioning. This was a tribute to the motor designing ability and construction work of President Louis S. Clarke and John C. Spiers. This reminds me that autocar output is always disposed of in advance, and it is a common thing to see Frank Eveland, the Spalding Company's New York manager; W. J. Stewart, of the New Jersey Auto. Co., and Manager Ben Smith, of the H. B. Shattuck Co., of Boston, at the Autocar factory, each waiting to grab the next car that comes out.

The Olds Motor Works' Oldsmobile, which figured in the gold medal class, was driven by Ray M. Owen, the New York manager. The Geo. N. Pierce Co. for once did not have a perfect record and some little thing which did not amount to much penalized the machine and its driver, Percy Pierce. A newcomer which must be watched is the gasolene carriage made by the Fredonia Mfg. Co., of Youngstown, Ohio. Two of those machines did capital work and were not expected to make the record they did. Carlton Mabley, of Smith & Mabley of New York, drove his American made C. G. & V. through at express train speed. One of the party in Mr. Mabley's car was his bride, who took a very active interest in the success of the new American machine and whose girlish beauty captivated the ladies along the road. The Neftel Automobile Co., of New York City, entered their combination gasolene and electric vehicle and it did the electric carriage business no good, since something went wrong with the affair early in the test. The Winton Motor Carriage Co. seemed to treat the run as a joke, and I do not think tried very hard for a first place, but Harry Fosdick, the Boston manager for Winton, scored a scoop by running through from Boston to New York in the fastest time on record. This was a clever move, as it is doubtful if such good roads and such good directions, together with a moonlight night, can be had for some time again.

The newspapers evinced great interest in the contest and many of the metropolitan papers had special representatives with the run. The irrepressible John C. Wetmore represented the *N. Y. Herald* and sent to Automobile Editor John Gerrie very satisfactory reports. In describing the Connecticut girls for the *Motor Age*, Mr. Wetmore said that "Their cheeks were as rosy as apples on the trees and that they were dressed for the most part in Connecticut wrappers." Of course, John has not forgotten his Biblical training, and his mind no doubt reverted to an elder sister, Mrs. Eve, who tradition says had a wrapper of fig leaves. At Springfield, some hours after filing his dispatch to the *Herald*, the local telegraph manager called John up and stated that if he wanted the dispatch to go off that night he would have to come to the office



and rewrite it, as their operators did not understand Japanese. John explains that he once lived with a Japanese family in Chicago and that at rare intervals he lapses into the writings of the land of the Mikado.

Arthur J. Eddy, the Chicago lawyer whose "Two Thousand Miles in an Automobile" is the most interesting book on the subject of automobiling yet published, makes in it some very practical observations, which are none the less valuable on account of the very interesting style in which they are written. Concerning the various modes of power now employed in motor vehicles he says: "Any woman can drive an electric automobile, any man can drive a steamer, but neither man nor woman can drive a gasolene; it follows its own odorous will, and goes or goes not, as it feels disposed. One of the beauties of the beast is its strict impartiality. It shows no more deference to maker than to owner; it moves no more quickly for expert mechanic than for amateur driver. When it balks it balks—inventor, manufacturer, mechanic, stand puzzled; suddenly it starts—and they are equally puzzled." While I can't quite indorse all of the foregoing, yet I've seen enough of automobiles to know that this balkishness is not by any means confined to the gasolene type. Evidently Mr. Eddy himself thinks rather well of the gasolene vehicle, since he uses no other form of power in the vehicles he tours in.

I saw a real one horse power contrivance last week up on North Broad street, Philadelphia, in a large three-story building that will be occupied by the Banker Bros. Automobile Co., who have found their two places a little farther downtown too small for them. On Dec. 1 the Bankers will go into the new building, which for forty years has been devoted to the horse, his sale, livery and boarding. The one horse power referred to is situated on the second floor and is operated by "Dick," who has churned a revolving barrel sort of thing for twelve years. Dick is fastened in a pen and his continual tramping runs the elevator. This sort of H. P. is quite common yet in sawmills and for feed cutting on the farms of the West, and that was where "Dick" learned his trade before he came to Broad street to supply power to cut feed for his brothers. The Banker Brothers will use "Dick" as a curiosity until they install a new Otto gas engine of 25 H. P., which will not only run the elevator, but will also supply power for the machine

shop as well. It is the Banker Bros.' plan, after supplanting "Dick" by a motor, to pension him and turn him loose on some sunny slope near the Quaker City, where he may pass his last days in peace. Arthur Banker and L. D. Munger, when sizing "Dick" up with the writer, wondered how they will get him in the field, as Dick has been a house dweller for so many years that there is danger when he gets into the street once more he will continue his old trick of turning the barrel and dig a hole in Broad street and then fall into it.

I suggested that the Bankers parade "Dick" through the streets of Philadelphia with an appropriately worded sign on him, stating that he had been retired by the automobile and and an Otto gas engine. The former proprietor of the livery stable, Mr. Hart, is one of the oldtime horsemen, who specified in his lease to the Bankers that he be allowed to occupy an office desk in the new establishment, since he would not be able to break up his forty years' daily visit to the building all at once. To this reasonable proposition the Banker Bros., with fine sentiment, assented. Mr. Hart is well disposed toward automobiles and has taken several rides with George Banker, but he confesses that he gets rattled when Banker steers within an inch of a street car. Mr. Hart gives automobilists a cordial reception and offers all comers a sample of his very fine harness oil, made somewhere up on the Monongahela river. The Banker Bros.' establishment will give them the greatest floor space in Philadelphia and will be a worthy competitor of their Pittsburg and New York stores.

Wedding bells will soon ring in Philadelphia for the marriage of C. A. Musselman, the clever young secretary and treasurer of the Trade Advertising & Publishing Co., publishers of the *Cycle and Automobile Trade Journal*. Mr. Musselman has been a tower of strength to his company, as he is not only a clever advertising man but an artist as well, and together with Editor James Artman and Geo. H. Busby, these people can point to a record unequaled in the publishing business in their particular line. That Mr. Musselman has won his bride—if hard work counts for anything in a

business way—there can be no gainsaying, and I would like to see the old liberty bell rung a few times for the young publisher of the Quaker City.

Mr. E. B. Gallaher, who for two years was engineering head of the Fournier-Searchmont Co., of Philadelphia, has decided to make a change, and will in future be found at the pretty factory at Tarrytown, where he will be general manager of the Mobile Co. of America. Mr. Gallaher made splendid progress with the Philadelphia company, as the verdict in regard to the Fournier-Searchmont in the Boston-New York run will show, and he must have been offered very convincing inducements to induce him to desert the Quaker City concern. It may be that John Brisben Walker has decided to make the two types of automobiles, one steam, the other gasolene, as Mr. Gallaher is essentially a gasolene man, but we shall know more of this later on.

Trade journals are getting too technical for the ordinary man who wants to know something about an automobile, especially his own, said a man the other day, and what they print sometimes is not always easily understood by a factory superintendent. It is one thing to sit in an office and draw lines and write things of a deeply technical nature, but it is another thing to get the man who wants to know to understand what the editor is writing about. Many a mechanic will bear witness to having constructed motors, pumps, and other things on the plan laid down by the editor in his lofty editorial sanctum and they do not always come out right. This idea was discussed with the writer recently by I. D. Lengel, the clever mechanic and superintendent of the Meteor Engineering Co., Reading, Pa., who has had some experience in following trade journal drawings. Mr. Lengel thinks that the mechanic has to learn by actual, practical experience of a working order what will work right, rather than follow the theoretical plans of the editor. This Mr. Lengel thinks can be said of the leading technical journals. It seems to me what is wanted is a sort of A, B, C primer which should be sent out with every manufactured automobile and part of automobiles on the plan of the illustrated booklet one gets when he buys a camera, which tells all about stops, diaphragm, etc. What a man really wants to know is how the automobile he owns should be run and all about the various parts thereof, where they are located and where he can put his finger on the trouble when it occurs. He is not interested in the other fellow's automobile very much, but he is particularly interested in his own automobile.

THE SENATOR.